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The Role of E-Learning in the Evolution of Professions: A Moroccan Contextualization

By Adil Boulahoual & Meriem Rafik

Hassan II University

Abstract- *From bullshit jobs to bullshit people*, the relevance of the individual within the group has consistently been a determining factor in their social value and personal esteem. The advent of new technologies, particularly artificial intelligence (AI), poses an existential question to humanity about its place in a world rapidly saturated by AI. The latter has propelled the evolution of professions at an unparalleled speed, a challenge the academic world struggles to manage. If the new era of the university has indeed arrived, it must then redefine its role as an intellectual institution to avoid a general mediocrity of profiles, a pitfall it had encountered in its trajectory as an entrepreneurial university. It is imperative for the university to ensure the democratization of human intelligence, a crucial element in the strategic management of the advent of artificial intelligence, and guarantee social equity in access to knowledge.

Thus, it is appropriate to assign to E-learning the function of certifying and preparing the technical profiles necessary for the practical functioning of society. E-learning emerges not only as an alternative solution but as an evolution of the modern university, distinguishing between graduation and certification.

Keywords: *e-learning, artificial intelligence, higher education, evolution of professions, theory of economic behavior, soft skills, morocco.*

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The Role of E-Learning in the Evolution of Professions: A Moroccan Contextualization

Adil Boulahoual ^α & Meriem Rafik ^σ

Abstract- From *bullshit jobs to bullshit people*, the relevance of the individual within the group has consistently been a determining factor in their social value and personal esteem. The advent of new technologies, particularly artificial intelligence (AI), poses an existential question to humanity about its place in a world rapidly saturated by AI. The latter has propelled the evolution of professions at an unparalleled speed, a challenge the academic world struggles to manage. If the new era of the university has indeed arrived, it must then redefine its role as an intellectual institution to avoid a general mediocrity of profiles, a pitfall it had encountered in its trajectory as an entrepreneurial university. It is imperative for the university to ensure the democratization of human intelligence, a crucial element in the strategic management of the advent of artificial intelligence, and guarantee social equity in access to knowledge.

Thus, it is appropriate to assign to E-learning the function of certifying and preparing the technical profiles necessary for the practical functioning of society. E-learning emerges not only as an alternative solution but as an evolution of the modern university, distinguishing between graduation and certification. Within this theoretical framework, supported by the theory of economic behavior, we will explain how Morocco can follow the global technological trend by creating intellectual and technical profiles simultaneously, strengthening self-taught profiles, consolidating cross-cutting skills, and establishing a culture of informational follow-up beyond the graduation curriculum. The five crucial points addressed include the degradation of the value of university degrees in Morocco and their relationship to the labor market, the exploration of the theory of behavioral economics and the quest for meaning, the resilience of the academic world in the face of technological revolution, the pedagogy of E-teaching, and finally, a perspective on the future of employment in Morocco.

Keywords: *e-learning, artificial intelligence, higher education, evolution of professions, theory of economic behavior, soft skills, morocco.*

Résumé- Du *bullshit jobs au bullshit people*, la pertinence de l'individu au sein du groupe a constamment constitué un élément déterminant de sa valeur sociale et de son estime personnelle. L'avènement des nouvelles technologies, en particulier l'intelligence artificielle (IA), confronte l'humanité à la question existentielle de sa place dans un monde rapidement saturé par l'IA. Cette dernière a propulsé l'évolution des métiers à une vitesse inégalée, que le monde universitaire peine à gérer. Si le nouveau règne de l'université est effectivement arrivé, celle-ci doit alors redéfinir son rôle en tant

qu'institution intellectuelle afin d'éviter une médiocrité générale des profils, écueil qu'elle avait engendré dans sa trajectoire en tant qu'université entrepreneuriale. Il est impératif qu'elle assure la démocratisation de l'intelligence humaine, élément essentiel dans la gestion stratégique de l'avènement de l'intelligence artificielle, et garantisse une équité sociale dans l'accès au savoir.

Il convient ainsi de confier au E-learning la fonction de certification et de préparation des profils techniques nécessaires au fonctionnement pratique de la société. Le E-learning émerge alors non seulement comme une solution alternative, mais comme une évolution de l'université moderne, distinguant entre la diplomation et la certification. Dans le cadre de cette réflexion théorique, étayé par la théorie du comportement économique, nous expliquerons comment le Maroc peut suivre la tendance technologique mondiale en créant des profils intellectuels et techniques simultanément, en renforçant les profils autodidactes, en consolidant les compétences transversales, et en instaurant une culture de suivi informationnel au-delà du cursus de diplomation. Les cinq points cruciaux abordés sont la dégradation de la valeur des diplômes universitaires au Maroc et leurs relations au marché du travail, l'exploration de la théorie de l'économie comportementale et la quête de sens, la résilience du monde universitaire face à la révolution technologique, la pédagogie du E-teaching et enfin, une perspective sur l'avenir de l'emploi au Maroc.

Mots-clés: *e-learning, intelligence artificielle, enseignement supérieur, évolution des métiers, théorie du comportement économique, soft skills, maroc.*

1. INTRODUCTION

La transition du paradigme, comme l'a préalablement identifié David Graeber à travers le concept d'emplois dénués de sens, communément qualifiés de « bullshit jobs », s'oppose désormais à une société émergente qui accorde une importance accrue à l'utilité, considérant toute personne non productive comme dépourvue de sens, engageant une productivité à la limite de toxicité. Graeber a souligné le manque de signification inhérent à de nombreux emplois et leurs répercussions néfastes tant sur le bien-être individuel que sur la société dans son ensemble. Il a mis en lumière la relation problématique entre le travail et la valeur personnelle, un lien contribuant à la détérioration de la santé mentale des individus (Graeber, 2018).

Au cours de la pandémie de COVID-19, le monde a connu, grâce aux nouvelles technologies, une optimisation de la productivité, incitant quasiment

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l'ensemble de la planète à aborder le travail avec une perspective renouvelée (Charef et al., 2023). La notion même d'utilité a subi une transformation radicale en un laps de temps, de 2018, date de rédaction du livre de Graeber, à nos jours. Cette métamorphose s'est manifestée à travers une redéfinition significative des valeurs sociales et de la productivité. Bien que la pandémie mondiale ne soit pas nécessairement la catalyseuse direct de ce changement, elle a indubitablement renforcé la transition numérique, non comme un choix, mais comme une obligation impérieuse, grâce au télétravail qui a émergé comme un moyen d'optimiser le temps de travail et les ressources nécessaires pour atteindre des résultats concrets (Mbiadjo Fandio et Nnomo, 2022), ou comme le E-learning qui a poussé l'école et l'université à sortir de leur léthargie (Rafik, 2023).

Dans ce cadre, diverses études se sont penchées sur le recours au E-learning en tant que substitution à l'enseignement en présentiel (Giannakos et al., 2022). Toutefois, il s'avère impératif de réévaluer cette approche et de moderniser le E-learning. Plutôt que de le concevoir comme une simple alternative, il convient de le considérer comme un complément au modèle pédagogique conventionnel. Cette perspective actualisée vise à optimiser l'efficacité de l'apprentissage. Dans cette optique, le marché du travail accordera une plus grande valeur aux certificats complémentaires aux diplômés, les considérant comme

des outils plus efficaces pour distinguer et sélectionner des profils de plus en plus uniques et distingués (Costantino and Rodzinka, 2022). Les individus seront ainsi amenés à gérer leurs propres carrières en investissant de manière judicieuse tant sur le plan intellectuel que certifié, afin de se démarquer sur un marché compétitif.

Par ailleurs, l'avancée de l'intelligence artificielle (IA) ouvre de nouvelles perspectives quant à l'évolution des métiers (Laurent, 2023). Si cette transformation peut être maîtrisée par les nouveaux diplômés, la situation se complexifie pour les individus déjà en activité. Il est impératif que ces derniers, conscients de la nécessité de s'adapter aux changements constants du marché du travail, prennent en main leurs formations et développements professionnels. Les certifications en ligne, offertes dans une grande diversité, émergent ainsi comme des moyens privilégiés pour maintenir sa compétitivité sur le marché de l'emploi. Le Maroc, comme de nombreux autres pays, fait face à des changements rapides dans son économie et sur le marché du travail. Des changements qui nécessitent la création d'un projet social relatif à l'intégration de l'intelligence artificielle au tissu économique marocain et qui comprend plusieurs volets (Rafik, 2023) dont celui de la formation. L'utilisation croissante du E-learning offre de nouvelles opportunités pour répondre aux défis des NBIC en fournissant une formation flexible et accessible (Meski, 2021).

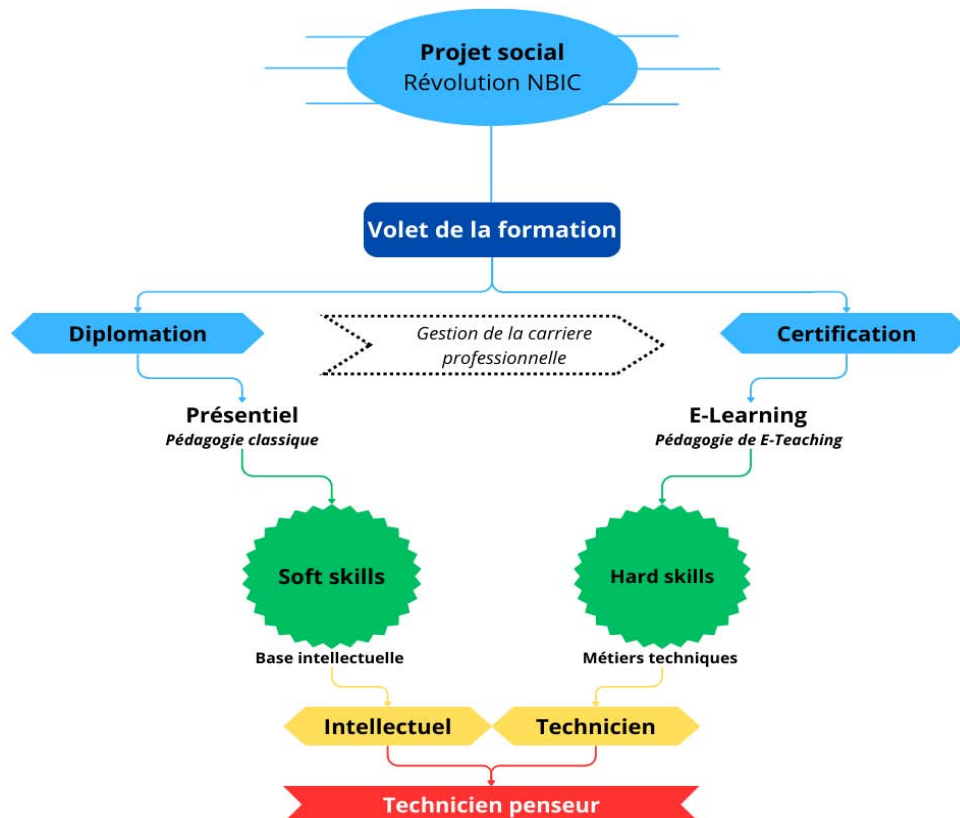


Figure 1: Structure de recherche (par les auteurs)

Le schéma présenté ci-dessus simplifié et donne une visibilité générale du sujet donc pour réussir à répondre à notre problématique centrale du rôle du E-learning dans l'évolution des métiers au Maroc, en choisissant comme ancrage, la théorie du comportement économique (Thaler, 2015), nous allons devoir montrer comment le E-learning grâce à la certification (complément de la diplomation) peut permettre d'optimiser l'accès au savoir et assurer une veille professionnelle dans la gestion de toute carrière.

Cette réflexion théorique préconise une réflexion approfondie sur la nature du travail, de l'apprentissage et de l'adaptation dans un monde où la productivité et l'utilité gagnent en importance. Il met en évidence la nécessité de se libérer des « bullshit jobs » et d'assumer activement la responsabilité de son propre développement professionnel, tout en reconnaissant la valeur essentielle du E-learning en tant que complément à l'enseignement traditionnel et la position centrale de l'université dans cette évolution. Les cinq points cruciaux abordés sont la dégradation de la valeur des diplômes universitaires au Maroc et leurs relations au marché du travail, l'exploration de la théorie de l'économie comportementale et la quête de sens, la résilience du monde universitaire face à la révolution technologique, la pédagogie du E-teaching et enfin, une perspective sur l'avenir de l'emploi au Maroc.

a) *La Dégradation De La Valeur Des Diplômes Universitaires Marocains Et Leurs Rapports Au marché du Travail*

Avant l'indépendance du Maroc, l'accent était mis principalement sur l'enseignement religieux, notamment avec "LAMSID" et l'apprentissage du Coran. Pendant la période du protectorat français, le Maroc a connu un enseignement stratifié et classiste. Les crèches d'enfants ont émergé à la nécessité des familles françaises. L'Église a alors joué un rôle prépondérant dans leur création. Il convient de mentionner que ces institutions accueillaient également les enfants des notaires marocains (Knibiehler, 1994). Ce qui a permis plus tard à ces derniers d'intégrer les universités et les grandes écoles européennes. La bourgeoisie marocaine a investi dans l'éducation de ses enfants en les envoyant étudier à l'étranger. Au moment où la classe moyenne également comprend le rôle d'équité sociale que l'école peut offrir à leurs enfants, de 1944 à 1956, le taux de scolarisation des enfants marocains passe alors de 2% à 13% (Chafiqi et Alagui, 2011).

Après 1956, la création de cadres marocains visait à remplacer les profils administratifs français qui devaient alors quitter leurs postes d'un Maroc indépendant (Knibiehler, 1994) devenait une préoccupation majeure dans la construction du « Grand Maroc », projet d'appui de la souveraineté du royaume. Dans les années 60, le certificat des études primaires

(5 ans) était suffisant pour trouver un emploi, l'effort de création d'un système éducatif solide touche surtout l'étape primaire, alors que le développement du secondaire est ralenti par le déficit de personnel enseignant qualifié. Les années 70 ont vu des gens travailler avec le brevet des collèges (9 ans) voir simplement le niveau brevet (Emperador Badimon, 2020). La fin des années 70 a rendu le baccalauréat ou le niveau bac obligatoire (12 ans d'étude) (Hadab, 1998). La relation diplômes/marché du travail a donc suivi la construction d'une base administrative éducative du Maroc.

Les années 80 ont connu une intellectualisation accrue, poussant une génération de Marocains de la classe moyenne et ouvrière vers la poursuite d'études supérieures principalement la licence (Bac +4) (Gérard and Schlemmer, 2003a). Les années 90 à 2000 le marché du travail est devenu plus compétitif le Diplôme des Études approfondies (DEA) (Bac+5) et le Diplôme des Études supérieures (DES) (BAC+6) prennent plus d'ampleur. Finalement en 2003, le Maroc a adopté le système LMD pour harmoniser les cursus avec les normes européennes. Il y a deux ans le Maroc a fait une tentative d'intégration du système Bachelor qui a échoué (Meski, 2021). Aujourd'hui, le doctorat (Bac + 11 ans) commence à perdre de son attrait sur le marché du travail (Nazih, 2021), les chances de travail des doctorants se réduisent à cause d'une « surqualification », les DRH préfèrent souvent ne pas recruter de doctorants pour éviter des salaires plus élevés sans justification de compétences supérieures à celles d'un titulaire de master (Agénor and El Aynaoui, 2005a). La dégradation de la valeur des diplômes s'accompagne de taux fulgurant de chômage et d'attractivité énorme des études supérieures, comment expliquer cette contradiction? Si les diplômes ne sont plus garants de l'accès au marché du travail pourquoi les jeunes bacheliers investissent de plus en plus dans les cursus universitaires plus longs et plus compliqués ?

Le dernier rapport de l'HCP expose des données de chômage et d'activité générale qui poussent à réflexion. Le volume du chômage a atteint, au troisième trimestre de 2023, 1 625 000 personnes au niveau national (248 000 chômeurs de plus), un taux de chômage record et un taux d'activité nationale de 43,2%, avec 297 000 emplois détruits entre les mois d'octobre 2022 et 2023, se décomposant en une diminution de 29 000 postes en milieu urbain et de 269 000 en milieu rural. Les taux les plus élevés demeurent ceux parmi les jeunes âgés de 15 à 24 ans, enregistrant 38,2%, les femmes 19,8% et les diplômés, 19,8%. Le secteur de l'« agriculture forêt et pêche » a perdu 297 000 postes d'emploi, les services 15 000 et celui des BTP 2 000, alors que le secteur de l'« industrie y compris l'artisanat » en a créé 14 000 (HCP, 2023).

Les nomenclatures utilisées dans l'enquête nationale sur l'emploi réalisé trimestriellement par le

HCP sont: la nomenclature analytique des professions; des diplômes; de la situation dans la profession; des activités et puis du Code géographique du Maroc (Gauthier, nd.). Malgré l'importance donnée aux diplômes dans ces rapports, ces taux de chômage vont à l'opposé des données du rapport présenté par Plan national d'Accélération de la Transformation de l'Écosystème ESRI 2023 et le ministère de l'Enseignement supérieur qui montre une attractivité fulgurante de l'investissement des jeunes dans des diplômes de plus en plus élevé. 321 925, c'est le total des nouveaux inscrits (avec baccalauréat) le total est de ce qui donne

un effectif global de 1 218 687 et donc un chiffre supérieur de 4,09% en comparaison avec 2021-2022 et un effectif des diplômés de 181 866 supérieurs de 0,26% par rapport à l'année universitaire précédente. Il est aussi possible de remarquer sur le tableau ci-dessous une augmentation du nombre d'étudiants qui rejoignent le deuxième et troisième cycle en comparant avec 2021-22. Il est clair que les taux d'inscription en études supérieures continuent d'être attractifs aux nouveaux Bacheliers (PNATE ESRI, 2023).

Université	% التغير ب Var en % (2)- (1) / (1)	2022-2023						إجمالي Global (2)	2021-22 (1)	الجامعة
		الدواوين El	إناث Féminin	الدكتوراه Doctorat	الماستر Master	السلك العادي Cycle normal	المستجدين NI			
Mohammed V Rabat	3.82	2 807	48 784	7 699	9 227	70 394	24 596	87 320	84 104	محمد الخامس الرباط
Hassan II Casablanca	5.35	2 386	82 367	6 904	7 821	129 532	42 906	144 257	136 926	الحسن الثاني الدار البيضاء
Sidi Mohammed Ben Abdellah Fès	1.68	1 663	53 214	5 773	4 520	89 911	30 577	100 204	98 545	سيدي محمد بن عبد الله فاس
Cadi Ayyad Marrakech	8.79	977	62 300	3 878	3 236	106 886	37 204	114 000	104 792	القاضي عياض مراكش
Sultan Moulay Slimane Beni Mellal	8.18	175	25 946	2 254	1 945	42 533	14 228	46 732	43 197	السلطان مولاي سليمان بني ملال
Mohammed Premier Oujda	-3.21	643	43 409	3 111	3 384	75 377	17 606	81 872	84 587	محمد الأول وجدة
Abdelmalek Essaâdi Tétouan	2.09	1 637	66 024	4 257	7 156	116 189	30 070	127 602	124 992	عبد المالك السعدي تطوان
Chouaib Doukkali El Jadida	4.16	412	16 773	1 113	871	25 916	9 500	27 900	26 786	شعيب الككالي الجديدة
Hassan I ^{er} Settat	2.52	824	24 519	1 177	1 780	47 449	9 431	50 406	49 165	الحسن الأول سطتات
Moulay Ismail Meknès	-0.60	698	43 790	1 739	2 740	75 468	20 170	79 947	80 431	المولي إسماعيل مكناس
Ibn Tofail Kénitra	10.81	1 513	46 788	5 214	8 090	76 580	23 055	89 884	81 116	ابن طفيل القنيطرة
Ibn Zohr Agadir	-0.73	728	73 259	2 095	3 566	139 883	35 765	145 544	146 615	ابن زهر أكادير
Total	3.24	14 463	587 123	45 214	54 336	996 118	295 108	1 095 668	1 061 256	المجموع

Figure 2: Effectifs des étudiants par université (source: [PNATE ESRI, 2023])

Lorsque l'on aborde la qualité de l'enseignement supérieur, cela évoque, pour ceux en mesure de procéder à des comparaisons, la qualité de la formation dispensée aux étudiants marocains dans les années soixante-dix, en contraste avec celle offerte de nos jours. Autrefois, les profils étudiants répondaient à un ensemble déterminé de compétences, telles que la capacité de synthèse, le jugement, une certaine finesse intellectuelle, une approche cartésienne, ainsi que des compétences avérées en matière de rédaction et de réflexion. Actuellement, la dégradation de la qualité de l'enseignement supérieur est largement admise. Cela se manifeste en premier lieu par le niveau insatisfaisant des indicateurs de performance, tant internes qu'externes. (Zouaoui, 2006).

La perception de la valeur des diplômes universitaires peut être sujette à des changements au fil du temps en raison de divers facteurs. Il est important de noter que ces changements peuvent varier selon les régions, les domaines d'études et les contextes socio-économiques (Van Tilburg, 2002). Parmi les facteurs qui peuvent contribuer à la dégradation potentielle de la valeur des diplômes universitaires au fil du temps nous trouvons l'inflation académique (le nombre de diplômés universitaires augmente plus rapidement que la demande sur le marché du travail), la qualité de l'enseignement, l'évolution des besoins du marché du

travail, la saturation du marché, l'évolution des normes éducatives, ou même la montée en puissance des alternatives (Laflamme, 1996) comme le E-learning.

En 2020, le Maroc a misé sur le E-learning afin qu'il puisse servir de levier de résilience face à la propagation de la pandémie de COVID-19. Cette initiative s'est concrétisée par la mise en œuvre de divers outils technologiques, notamment le programme Tilmid TICE et la diffusion de cours à travers les chaînes nationales, entre autres. L'université marocaine a également activement participé à ce processus en proposant des formations à distance, des MOOC (Cours en ligne ouverts et massifs) et des sessions «Lives» (diffusions audiovisuelles en direct sur les réseaux sociaux) animées par certains enseignants. (Charef et al., 2023). Le E-learning été alors une simple solution alternative au système scolaire et universitaire classique.

b) La Théorie De L'économie Comportementale Et La Recherche De Sens

«La psychologie est évidemment à la base de l'économie politique et, en général, de toutes les sciences sociales. Un jour viendra peut-être où nous pourrons déduire des principes de la psychologie les lois de la science sociale.»

Vilfredo (Pareto, 1981)

Nous ne vivons pas dans un monde d'éconos, mais dans un monde d'humains. Adam Smith le père de la pensée économique moderne a reconnu explicitement ce fait. En 1759 avant son magnum opus recherche sur la nature et les causes de la richesse des nations, il avait publié un ouvrage sur les passions humaines «The Theory of Moral Sentiments», une notion qui n'apparaît dans aucun manuel d'économie. L'Homo œconomicus est sans passion, c'est un optimisateur à sang froid (Haakonssen, 2002). Selon A. Smith, le libéralisme économique s'érige en la seule configuration d'organisation sociale apte à assurer l'équilibre délicat des passions humaines. Intégrant des considérations linguistiques, philosophiques et psychanalytiques à son approche économique, cette étude dévoile l'œuvre d'A. Smith comme étant façonnée par une éthique ouverte tout en étant encadrée par une morale socialement codifiée (Keppler, 2010). S'ajoute à cette réflexion les travaux de pionniers tels que Daniel Kahneman Prix Nobel de l'économie en 2002 sur l'économie expérimentale et Amos Tversky (Kahneman and Tversky, 2000). Ils ont à eux deux jeté les bases de l'économie comportementale qui a permis à Richard H. Thaler d'obtenir le prix Nobel de l'économie pour l'année 2017, en mettant en lumière les écarts systématiques par rapport à la rationalité supposée dans les modèles économiques traditionnels (Thaler, 2015).

Cette théorie explique que l'économie comportementale se distingue des approches traditionnelles en supposant que les individus ne sont pas toujours parfaitement rationnels dans leurs décisions économiques. Au lieu de cela, elle intègre des éléments de psychologie, de cognition et de comportement dans l'analyse économique. L'économie comportementale utilise des modèles théoriques pour expliquer les phénomènes économiques en tenant compte des biais cognitifs, des émotions, des influences sociales et d'autres facteurs psychologiques qui peuvent influencer les choix économiques. Les chercheurs en économie comportementale se sont penchés sur divers aspects, tels que les décisions d'investissement, la consommation, les choix éducatifs, et ont examiné comment les individus réagissent à des incitations économiques dans des contextes réels (Thaler, 2015). Certains principes clés de l'économie comportementale incluent les biais cognitifs (comme la surévaluation des gains probables et la sous-évaluation des pertes probables), les heuristiques (raccourcis mentaux utilisés dans la prise de décision), l'aversion à la perte, l'influence sociale, etc. Ces concepts sont intégrés dans des modèles qui cherchent à expliquer et à prédire le comportement économique observé (Thaler, 2015).

Ainsi, l'économie comportementale fournit un cadre théorique qui enrichit et élargit les approches conventionnelles de l'économie, en reconnaissant la

réalité de comportements humains qui ne correspondent pas toujours aux prédictions des modèles classiques. Cette perspective a des implications importantes pour la compréhension des marchés, des politiques publiques et des choix individuels. L'économie comportementale se penche sur la manière dont les individus prennent des décisions économiques dans la réalité, en tenant compte de divers aspects psychologiques, émotionnels et sociaux qui peuvent influencer ces choix.

Le savoir a ses raisons que le travail ignore. Au-delà ou en deçà de la position qu'il pourrait occuper dans la société, l'individu détient une valeur intrinsèque qui justifie la quête et l'exigence d'une reconnaissance, même symbolique. Toutes les voies permettant l'enrichissement et la valorisation du savoir sont minutieusement examinées et recensées, mobilisant tous les capitaux disponibles tant dans le cercle familial que dans l'espace public. La conscience d'être un individu «savant», associée au sentiment d'une certaine supériorité, au sein d'un milieu où le travail occupe une place prépondérante, vient combler ce que d'autres perçoivent comme une marginalisation. En effet, le savoir définit une position nécessairement distincte et façonne une identité marquée par la différence. (Gérard et Schlemmer, 2003). La conviction en la supériorité intrinsèque du savoir, où c'est par lui, et non par le travail, que l'homme réalise d'abord sa pleine essence, et où c'est lui qui attribue une signification au travail, justifie la légitimité de l'accès à une fraction de la classe sociale supérieure. Dans cette perspective, la recherche d'un emploi socialement valorisé ne laisse guère de place au renoncement, même si l'espoir peut parfois s'atténuer et que pointe un sentiment d'amertume.

Voici quelques façons dont l'économie comportementale peut être pertinente dans le contexte du choix d'un diplôme universitaire:

- *Biais De Confirmation:* Les individus ont tendance à préférer des informations qui confirment leurs croyances existantes. Cela peut influencer le choix d'un diplôme en favorisant des domaines qui correspondent aux intérêts ou aux convictions préalables de la personne, même si d'autres options pourraient être plus rationnelles d'un point de vue purement économique.
- *Aversion à La Perte:* Les gens sont souvent plus sensibles à la perte qu'au gain. Cela peut influencer le choix d'un diplôme en faisant en sorte que les individus évitent les domaines perçus comme risqués, même s'ils pouvaient offrir des opportunités significatives à long terme.
- *Biais Temporel:* Les individus ont souvent du mal à évaluer correctement les récompenses et les coûts à long terme par rapport à ceux à court terme. Cela peut influencer le choix d'un diplôme en favorisant des domaines offrant des bénéfices immédiats

plutôt que ceux qui pourraient nécessiter un investissement plus important à long terme.

- *Influence Sociale*: Les décisions liées à l'éducation sont souvent influencées par des facteurs sociaux, tels que les attentes familiales, les normes culturelles et les opinions des pairs. Ces influences sociales peuvent dévier le choix d'un diplôme de ce qui pourrait être considéré comme une décision purement rationnelle sur le plan économique.
- *Heuristiques Cognitives*: Les individus utilisent souvent des raccourcis mentaux (heuristiques) pour prendre des décisions plus rapidement, mais cela peut entraîner des choix suboptimaux. Par exemple, le choix d'un diplôme pourrait être influencé par des raccourcis tels que la réputation d'une université plutôt que par une évaluation approfondie des opportunités éducatives.

Le choix d'un diplôme universitaire est donc plus complexe que ce qu'il ne paraît et peut être influencé par divers facteurs comportementaux. L'économie comportementale fournit un cadre utile pour comprendre comment ces influences psychologiques peuvent jouer un rôle dans les décisions éducatives. Cette modélisation de la théorie de l'économie comportementale nous mène, alors vers la question que nous avons posée à la fin de la première partie, si les diplômes universitaires ne sont plus garants de l'intégration au marché du travail pourquoi les jeunes bacheliers continuent à investir (en temps, en énergie et en argent) dans ces formations ?

Entre médiocrité et excellence entre spécialisation et multidisciplinarité, l'université s'est perdue en route. Le rôle de l'université était d'ordre intellectuel, avec le temps elle est devenue entrepreneuse. Lorsque l'université s'est focalisée sur la préparation de cadre et salarié, elle a arrêté de créer des intellectuels et des penseurs, malgré cela elle a gardé son image de démocratisatrice de l'accès au savoir et la principale responsable de la recherche et développement (Alexandre, 2017). L'évaluation des universités repose sur des éléments quantitatifs, fétichistes et publicitaires, qui corrompent l'institution et contribuent à la détérioration de la valeur des diplômes universitaires. D'après James Heckman prix Nobel de l'économie pour l'année 2000, notre avenir économique dépend de la fourniture d'outils de mobilité ascendante et de la constitution d'une main-d'œuvre hautement scolarisée et qualifiée. (Cunha, et al., 2015). L'université est donc synonyme de l'estime personnelle et de validation sociale. Elle doit donc obligatoirement reprendre son rôle et sa position de démocratisatrice de la connaissance et de l'accès au savoir (Rafik, 2023), mais si, l'université se focalise sur la création d'intellectuels qui s'occupera de la formation des techniciens et des professionnels de demain ?

L'absence d'un projet social nous empêche d'avoir une politique transversale dans les domaines économiques, sociaux et culturels. C'est pour cela que la nouvelle université que nous allons inventer devra nous permettre de relever le défi immense de notre utilité dans un monde bientôt saturé d'intelligence artificielle (Rafik, 2023).

Joseph Schumpeter explique dans son livre le cycle des affaires (1939) la notion de la destruction créatrice: chaque innovation porte en elle le germe du progrès. Des innovations majeures détiennent le potentiel de transformer le monde. À chaque diffusion, elles engendrent la construction d'un nouvel ordre, affranchi des entraves de son prédécesseur. À chaque occurrence, un monde plus vélocé, plus efficace et plus moderne se présente. L'ensemble du milieu économique en bénéficie, tandis que l'Ancien Monde s'éclipse avec ses professions désuètes, excessivement onéreuses et trop languissantes. (Schumpeter, 1939).

c) *La Résilience Du Monde Universitaire Face A La Révolution Technologique*

La majorité des secteurs qui étaient jusqu'à lors stables malgré les mutations qu'a connues le monde depuis la révolution industrielle passent par une phase de remaniement général grâce à une nouvelle phase de l'histoire de l'économie «le capitalisme cognitif» (Dieuaide et al., 2003). Ce dernier souligne le rôle central de la connaissance dans la création de valeur et l'accumulation du capital. Le secteur de l'étude et de la recherche accompagne cette évolution, assurant l'adaptabilité humaine à ces changements. Le E-learning peut donc être un moyen de sortir l'université de son rôle entrepreneur à son vrai rôle cognitif et intellectuel. L'université est interpellée, elle doit se transcender. Il ne s'agit plus pour elle d'être uniquement concomitante avec les besoins du développement économique et social, il s'agit de les devancer et les anticiper (Miraoui, 2021).

Le Maroc, comme de nombreux autres pays, doit s'ajuster rapidement aux mutations économiques du marché du travail. L'émergence du E-learning offre des opportunités cruciales pour relever ces défis en proposant une formation flexible et accessible (Daoudi, 2007). Le E-learning n'est plus qu'une simple solution alternative à la forme pédagogique traditionnelle, mais il est devenu un complément incontournable à la veille professionnelle.

Deux profils émergent de cette dynamique: les nouveaux lauréats et les individus diplômés cherchant à assurer leur veille pour rester compétitifs sur le marché du travail. La gestion de carrière, qui n'est plus exclusivement du ressort des départements des ressources humaines, impose à chaque individu de garantir l'originalité de son profil et la veille de ses compétences. La distinction entre l'importance de la diplomation et celle des certifications devient apparente,

la première assurant la base intellectuelle et les soft skills, tandis que les certificats préparent le profil technique nécessaire à l'avancement social. L'université, en assurant la délivrance des diplômes (Softskills), établit une fondation intellectuelle qui permet d'éviter la médiocratie, justifiant ainsi la préservation de la valeur des diplômes face à toute dégradation potentielle (Deneault, 2015). Alors que le E-learning garant de la certification (Hardskills) assurera la partie technique nécessaire au fonctionnement de toute profession. Le diplôme seul apparaît désormais largement insuffisant dans un environnement mouvant, où nos enfants changeront plusieurs fois de métier, d'entreprise, de statut même (Miraoui, 2021). Les deux deviennent alors nécessaires à la construction du profil de tout individu. Le marché du travail a donc besoin de techniciens penseurs.

L'accent accru sur les soft skills, révélé par une recherche comparant les perceptions des étudiants et des employeurs dans différents pays, souligne la nécessité pour les entreprises et les établissements d'enseignement supérieur de collaborer pour sensibiliser les étudiants à l'importance de ces compétences transversales (Simon, 2022).

Les soft skills, cruciales dans un environnement en constante évolution, deviennent des atouts majeurs sur le marché du travail 4.0, selon une étude du cabinet McKinsey, la demande en compétences physiques et manuelles devrait chuter de 16% d'ici 2030 en Europe (Pôle emploi, 2022), au sein du marché de travail 4.0, les employés munis de compétences comportementales, communément désignés sous le terme de soft skills, connaîtront une demande croissante, jouant un rôle central dans les initiatives de transformation organisationnelle. Cette tendance préfigure une orientation stratégique accrue envers ces compétences dans les processus de recrutement projetés jusqu'à l'horizon 2030. Les softskills, également qualifiées de compétences comportementales ou compétences douces, représentent des aptitudes transversales dont le déploiement s'étend à divers contextes et est intrinsèquement lié au savoir-être des individus. Leur importance croissante dans l'environnement professionnel découle de leur complémentarité avec les hard skills (compétences techniques), constituant un impératif pour une performance optimale au sein d'une fonction donnée. En résumé, les soft skills incarnent un investissement prospectif, reflétant le développement personnel et l'amélioration de l'employabilité individuelle. Bien que leur acquisition soit plus ardue que celle des hard skills, ces compétences revêtent une importance primordiale pour exploiter pleinement le potentiel des nouvelles technologies et les transformer en un atout tangible pour les entreprises (Pôle emploi, 2022).

Le E-learning propose une large gamme de formations et de certifications dans divers domaines,

notamment le numérique et le digital. Certaines formations sont parfois gratuites et sont dispensées par d'éminentes universités internationales telles qu'Oxford ou Yale, ainsi que par des grandes entreprises comme Google ou Microsoft. Ce qui fait qu'un jeune indien au fin fond de son village peut acquérir des compétences en développement ou en Deeplearning et avoir un niveau aussi excellent qu'un lauréat d'une grande université américaine ou européenne de renommée. C'est donc de cette manière que la démocratisation de l'accès à la connaissance prend tout son sens.

Il est indéniable que l'employabilité des diplômés universitaires représente l'un des objectifs fondamentaux des programmes académiques mis en place par le système d'enseignement supérieur de tout pays aspirant à la compétitivité (Meski, 2021). Cet objectif peut uniquement être atteint si les programmes de formation universitaire reposent sur une architecture pédagogique intégrant, entre autres, des cours en langues étrangères, communication professionnelle, entrepreneuriat et compétences transversales. Les compétences transversales jouent également un rôle crucial dans les projets de transformation des entreprises, que ce soit dans le cadre d'une réorganisation, d'une fusion ou d'une acquisition. Les entreprises commencent à anticiper l'échéance de 2030, où les soft skills occuperont une place centrale dans les stratégies de recrutement des entreprises. (Pôle emploi, 2022). L'université devra également favoriser la collaboration et les approches interdisciplinaires en matière de résolution de problèmes, car les systèmes d'IA excellent dans les tâches spécialisées, mais peuvent être confrontés à des défis complexes et multidimensionnels.

Le gouvernement marocain a pris des mesures pour promouvoir le E-learning dans le pays. Des programmes et des politiques ont été mis en place pour faciliter l'accès à l'éducation en ligne, surtout dans les zones éloignées où l'accès à l'éducation traditionnelle peut être limité. Le Maroc a connu une augmentation de l'adoption du E-learning à tous les niveaux d'éducation, de l'enseignement primaire à l'enseignement supérieur. Les établissements éducatifs, tant publics que privés, ont mis en œuvre des plateformes en ligne pour offrir des cours et des ressources éducatives (Miraoui, 2021).

Selon les déclarations du ministre de l'Enseignement supérieur et de la Recherche scientifique, M. Miraoui, dans le cadre du Plan national d'accélération de la transformation de l'écosystème de l'Enseignement supérieur et de la Recherche scientifique (PACTE ESRI 2030) au Maroc d'ici 2027, on prévoit la formation de 22 500 lauréats dans le domaine du numérique, accompagnés de l'introduction de 144 nouvelles spécialités liées aux métiers du numérique, notamment en intelligence artificielle, data science, cybersécurité et big data. Douze universités publiques sont engagées dans la mise en œuvre de ce projet, en

collaboration avec le ministère de la Transition numérique et de l'Avancement technologique (Miraoui, 2023).

Malgré les efforts déployés par le gouvernement pour s'aligner sur les tendances technologiques, il est manifeste que la perspective d'un projet social clair en accord avec ces avancées n'est pas encore établie. Il y a un manque notable d'une initiative globale illustrant la trajectoire prédictive des investissements dans ce domaine. L'Europe, depuis longtemps considérée comme un modèle dans diverses dimensions, ne peut être imitée de manière incontestable dans le domaine des technologies émergentes, étant donné qu'elle peine également à surmonter ses propres défis pour combler le fossé numérique (Laurent and Copé, 2019). Par conséquent, il est impératif pour le Maroc de formuler sa stratégie nationale en tenant compte de son cadre politique, de l'allocation des ressources, de la gestion des données, de la souveraineté, ainsi que de ses caractéristiques culturelles et économiques uniques. Cette réflexion stratégique devient essentielle pour prévenir une dépendance numérique envers les pays qui ont judicieusement embrassé l'ère de l'intelligence artificielle en temps opportun.

II. LA PÉDAGOGIE DU E-TEACHING

Les différentes modalités de E-learning, qu'elles soient employées de manière autonome ou de concert, se présentent comme des instruments fondamentaux pour concevoir des expériences d'apprentissage en ligne à la fois efficace et captivante. La pédagogie du E-learning signale une transition de paradigme, caractérisée par une reconfiguration spatiotemporelle des séquences pédagogiques, engendrant ainsi l'avènement d'approches pédagogiques hybrides et inversées. Dans le contexte de l'enseignement supérieur 4.0, marqué par une flexibilité grandissante et influencé par l'évolution des métiers et les attentes des

employeurs, une emphase prospective est observée (Miraoui, 2021). L'objectif sous-jacent est d'équiper les apprenants de compétences universelles, les habilitant à réexaminer, agir, anticiper et concevoir des solutions alternatives au sein de scénarios prospectifs complexes. Cette approche intersectorielle intègre des dimensions interdisciplinaires et interprofessionnelles, favorisant ainsi la collaboration et la convergence de perspectives.

Lorsque nous parlons de nouvelle aire dans le monde de l'enseignement il est devenu important de parler de la pédagogie qui accompagne ce changement, plus précisément du E-teaching. Le E-teaching, en tant que composante essentielle du paysage éducatif contemporain, représente une modalité pédagogique novatrice qui exploite les possibilités offertes par les technologies éducatives. Cette approche transcende les limites traditionnelles de l'enseignement en favorisant une flexibilité spatiale et temporelle, tout en permettant une personnalisation accrue de l'expérience d'apprentissage. Au sein de l'enseignement supérieur 4.0, il s'intègre dans un écosystème éducatif axé sur la « flexibilité » croissante, répondant aux exigences évolutives du marché du travail. En adoptant une orientation résolument orientée vers l'avenir, le E-teaching vise à développer chez les apprenants des compétences polyvalentes, les préparant à naviguer dans un futur complexe (Kofi Mensah, 2021). Cette approche éducative émerge également comme un vecteur de transition vers un modèle pédagogique centré sur l'étudiant, où l'engagement actif et la collaboration sont encouragés, contribuant ainsi à façonner une génération d'apprenants autonomes et adaptables.

La conception des contenus d'apprentissage dépend également du type de méthodes E-Teaching que nous choisissons lors de la phase d'analyse. Examinons maintenant en détail la pyramide d'apprentissage avec le schéma suivant:

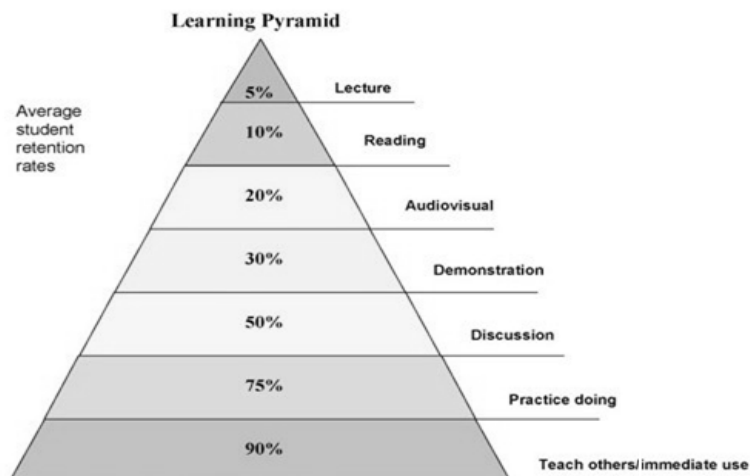


Figure 3: Pyramide d'apprentissage adapter des Laboratoires nationaux de formation à Bétel, dans le Maine

Source: (Abo El-Nasr, 2017)

La Pyramide d'Apprentissage, étudiée et élaborée par les Laboratoires Nationaux de Formation à Betel, illustre le pourcentage de rappel des apprenants associé à diverses approches. Les quatre premiers niveaux- la conférence, la lecture, l'audiovisuel et la démonstration- représentent des méthodes d'apprentissage passives. En revanche, les trois niveaux inférieurs- le groupe de discussion, la pratique active et l'enseignement aux autres- correspondent à des méthodes d'apprentissage participatives (actives).

Il est aussi recommandé de se référer au livre apprendre à apprendre de Abderrahim Harouchi qui propose une approche globale de l'apprentissage, centrée sur l'apprenant et ses besoins. L'auteur s'appuie sur les connaissances actuelles en psychologie de l'apprentissage pour proposer des conseils et des méthodes pratiques pour améliorer son efficacité. L'apprentissage est un processus actif et constructif ou l'apprenant doit être acteur de son apprentissage et ne peut se contenter de la réception des informations passivement. Il doit être capable de les comprendre, de les assimiler et de les utiliser. L'apprentissage est également un processus progressif. Il ne s'effectue pas en un jour, mais nécessite un effort et une persévérance constants. Finalement, L'apprentissage est un processus adaptatif ou l'apprenant doit être capable de s'adapter aux nouvelles situations et aux nouveaux défis (Harouchi, 2019).

Le livre aborde les différentes étapes de l'apprentissage, de la préparation à la consolidation, en passant par la compréhension et l'application. Il propose également des conseils pour améliorer sa mémoire, sa concentration et sa motivation, en se fixant des objectifs clairs et réalisables, en organisant le temps et les efforts, en faisant des pauses régulières, en révisant les connaissances, et en trouvant des méthodes d'apprentissage qui conviennent à chacun (Harouchi, 2019).

L'apprentissage assisté par ordinateur (AAO) englobe diverses modalités, dont l'enseignement assisté par ordinateur (EAO) et l'expérimentation assistée par ordinateur (EXAO). L'EAO implique l'utilisation de l'ordinateur pour l'enseignement, avec des séquences préprogrammées, tandis que l'EXAO concerne l'utilisation pédagogique de l'ordinateur pour des expérimentations. L'AAO va au-delà de l'enseignement pour inculquer de nouvelles notions et démarches aux apprenants. Il peut prendre des formes telles que l'apprentissage en ligne synchrone et asynchrone, l'apprentissage mobile, l'apprentissage mixte, le microapprentissage, l'apprentissage gamifié et l'apprentissage virtuel (Janitza, 2018). Les méthodes pédagogiques utilisées dans le E-learning peuvent être regroupées en trois points essentiels: L'apprentissage par objectifs, L'apprentissage par problèmes et l'apprentissage par simulation. Il est également pertinent de mixer des modes d'apprentissages à distances et en

présentiels comme éléments complémentaire à la formation comme les travaux dirigés, travaux pratiques et les stages.

L'évaluation des apprenants en formation en ligne (E-Testing) constitue un élément essentiel du paysage éducatif contemporain, et divers modes d'examen ont été développés pour répondre aux exigences spécifiques de cette modalité d'apprentissage. Les évaluations formatives, telles que les quiz en ligne et les exercices pratiques, sont fréquemment employées pour évaluer la compréhension continue des apprenants tout au long du processus d'apprentissage (Garrison and Kanuka, 2004). Parallèlement, les évaluations sommatives, comprenant des examens en ligne surveillés, offrent une évaluation plus formelle des connaissances acquises à la fin d'un cours (Means et al., 2010). Les approches d'évaluation authentiques, impliquant des tâches pratiques et des projets réels, sont également favorisées pour évaluer la capacité des apprenants à appliquer leurs connaissances dans des contextes réels (Conole, 2010). Ces différentes modalités d'évaluation en e-learning s'appuient sur les avancées technologiques telles que les plateformes d'apprentissage en ligne, les outils d'évaluation automatisée et les dispositifs de surveillance à distance, garantissant ainsi l'intégrité du processus d'évaluation.

Prenant l'exemple de Cisco, un acteur mondial dans le domaine des technologies réseau, leur programme de certification Cisco Certified Network Associate (CCNA) illustre comment l'E-Testing est mis en œuvre. Ces examens, administrés via la plateforme Pearson VUE, permettent aux candidats de s'inscrire en ligne, de se préparer à l'examen à l'aide de ressources en ligne fournies par Cisco, et de passer l'examen surveillé à distance grâce à des outils de surveillance, il faut donc allumer la webcam, faire un tour de l'espace d'examen et télécharger des logiciels de contrôle qui permettent d'éviter d'accéder à d'autres onglets ou sortir du lien d'examen, garantissant ainsi la sécurité et l'intégrité de l'évaluation. Les résultats sont généralement disponibles instantanément, et les certifications Cisco sont soumises à des exigences de recertification périodiques, reflétant une tendance générale de l'industrie vers des évaluations en ligne pour une plus grande commodité des candidats. La même chose pour le CFA (Chartered Financial Analyst) une certification dans le domaine de la finance, délivrée par l'Institut CFA ou les certifications proposer par l'entreprise IBM. Cette utilisation judicieuse de la technologie E-Testing offre aux candidats une flexibilité tout en assurant une évaluation rigoureuse des compétences en réseautage (Toby and Anthony, 2013).

La pédagogie occupe, trop peu de place à l'université. Du moins, comparativement à la recherche. Comme le soutient Bell Hooks (1994), « la plupart d'entre nous ne sont pas enclins à considérer la discussion sur la pédagogie comme essentielle pour

notre travail académique et notre croissance intellectuelle, ou la pratique de l'enseignement comme un travail qui améliore et enrichit l'érudition » (Deneault, 2015). L'arrivée de nouveaux outils de travail nous oblige à ouvrir la discussion sérieuse de la pédagogie dans les amphithéâtres. L'étudiant de demain n'a plus besoin de la connaissance, il a besoin des outils pour qu'il la trouve tout seul. L'intelligence artificielle privilégie les autodidactes, ce n'est que de cette manière que nous pourrions atteindre la démocratisation intellectuelle (Rafik, 2023).

Les cours deviennent pénibles autant pour les professeurs que pour les étudiants, dans l'air de l'instantané ou une vidéo de 5 min peut résumer un cours de 2 heures, la fracture numérique des professeurs qui n'ont jamais utilisé l'équipement audiovisuel de base est flagrante et crée une fissure énorme qui donne une image rétrograde de l'université. Internet fait que l'information n'est plus monopolisée par les enseignants et cela ne remet pas en question leur importance ni leur utilité, cela signifie juste que la nature du besoin a changé et qu'ils devraient s'y adapter, l'étudiant n'a donc plus besoin d'un enseignant comme source d'informations, mais, d'un enseignant mentor (Rafik, 2023).

Du point de vue pédagogique, il serait judicieux de se demander, pourquoi les softskills doivent être enseignés en présentiel et les hard skills en E-learning ? La réponse est en rapport avec l'importance de la répétition dans l'acquisition de nouvelles informations techniques et l'importance de l'interaction dans la construction de compétences sociales.

La répétition est un élément essentiel de l'apprentissage des hard skills. En effet, ces derniers nécessitent une maîtrise de la technique et de la pratique. Lorsque nous répétons une information ou une compétence, nous créons des nouvelles connexions neuronales. Ces connexions sont plus solides et plus durables que celles qui sont créées lors d'une seule expérience. Ce qui est plus facile dans un cadre contrôlé par l'étudiant: Le nombre d'heure de formation, nombre d'exercices réalisés, etc. Autrement dit, l'apprentissage des hard skills est de nature beaucoup plus quantitative et chiffrable. La répétition permet de fixer les connaissances et les compétences dans la mémoire à long terme. Elle permet également d'améliorer la rapidité d'exécution et la précision des gestes. En outre, la répétition permet de développer la confiance en soi et la capacité à faire face à des situations nouvelles.

En ce qui concerne les soft skills, elles nécessitent une interaction sociale par exemple pour l'apprentissage d'une nouvelle langue ou pour les techniques de communication, l'autre représente une partie importante du processus d'apprentissage. La formation est alors d'ordre qualitative. Les soft skills sont des compétences sociales et interpersonnelles qui

contribuent à la réussite dans la vie professionnelle et personnelle. Elles comprennent des compétences telles que la communication, la collaboration, la résolution de problèmes, la gestion du temps et le leadership.

L'apprentissage des soft skills nécessite une interaction sociale où ces compétences sont développées par la pratique et le feedback. Elles sont également influencées par notre environnement et nos relations avec les autres. Exemples d'interaction sociale dans l'apprentissage des soft skills: L'apprentissage des langues où il est important de pratiquer la communication avec des locuteurs natifs. Cela permet de développer la fluidité, la compréhension et la prononciation (Guinamard et al., 2015). L'apprentissage des techniques de communication telles que la prise de parole en public ou la négociation peuvent être améliorées par la pratique avec des pairs ou des mentors. Le développement de compétences interpersonnelles telles que l'écoute active ou la résolution de conflits peuvent être développées par la pratique dans des situations réelles (Bourgeois and Nizet, 2005).

L'interaction sociale dans l'apprentissage des soft skills offre de nombreux avantages, notamment, lorsque nous interagissons avec les autres, nous devons mettre en pratique les concepts que nous apprenons. Cela nous aide à les comprendre et à les intégrer plus profondément. Également, lorsque nous nous engageons dans des interactions sociales, nous sommes plus susceptibles de nous souvenir des informations que nous apprenons. Cela est dû au fait que nous sommes plus impliqués dans le processus d'apprentissage. Finalement, l'apprentissage en interaction sociale peut être plus motivant que l'apprentissage individuel. En effet, nous sommes plus susceptibles de nous sentir soutenus et encouragés lorsque nous travaillons avec les autres.

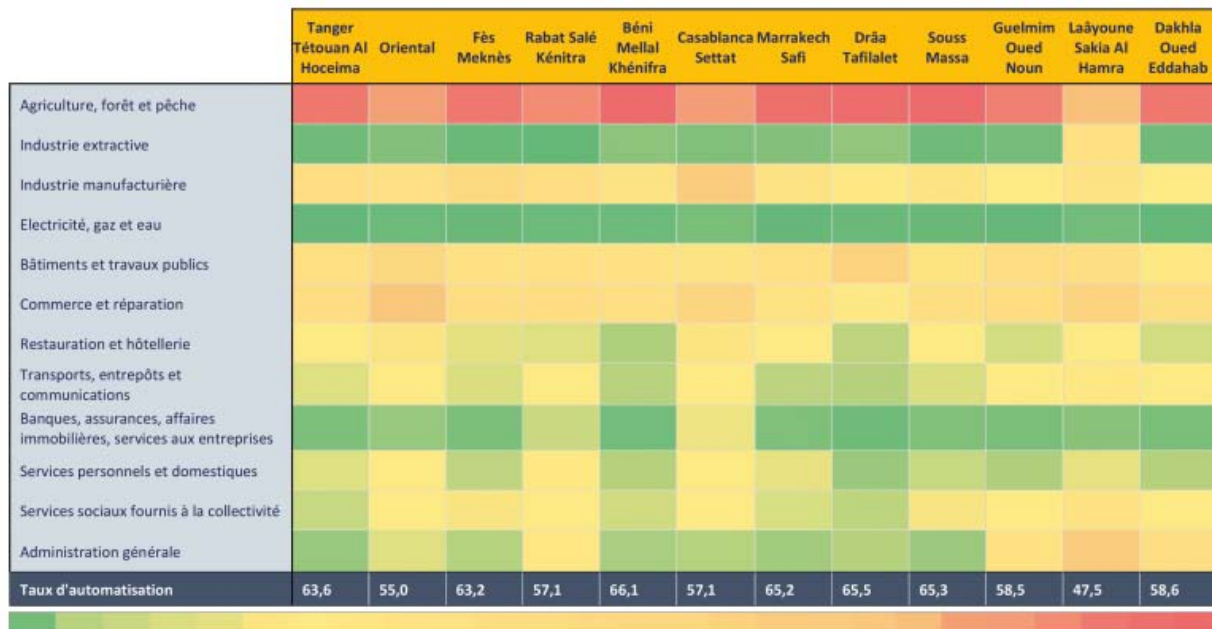
L'université 4.0 incarne une transition significative d'un modèle pédagogique axé sur l'enseignant à un mode d'apprentissage centré sur l'étudiant, constituant ainsi un nouveau paradigme intégrant des approches pédagogiques novatrices qui placent l'étudiant au cœur des préoccupations (Miraoui, 2021) et qui le pousse à apprendre comment apprendre. Plutôt que scruter les statistiques à la recherche du métier « qui marche » ne vaut-il pas mieux réfléchir sur la nature du monde de demain, pour s'y installer plus sûrement (Laurent, 2023) ?

III. L'AVENIR DE L'EMPLOI AU MAROC

Dans la section précédente, nous avons esquissé une perspective évolutive de l'apprentissage. Il serait donc opportun d'examiner les répercussions de ce projet universitaire sur le marché du travail au Maroc. 34,8% des emplois ont une forte probabilité d'automatisation, 6 régions présentent un taux d'automatisation supérieur à la moyenne nationale, 66,1% des emplois

dans la région de Beni Mellal/Khenifra seraient potentiellement automatisables soit le taux le plus élevé du Maroc. Ce sont des chiffres exposés dans un document réalisé par le ministère de l'Économie, des Finances et de la Réforme de l'Administration qui aborde plusieurs points essentiels concernant l'automatisation et son impact sur l'emploi au Maroc. Il met en évidence les secteurs avec un potentiel élevé d'automatisation, les régions les plus touchées, et les implications pour l'économie et la société. Le document se base sur des analyses détaillées de diverses sources, telles que le McKinsey Quarterly et le rapport Roland Berger (Abbad and Boumahdi, 2022).

Au cours des années récentes, particulièrement depuis 2013, une pléthore d'études prospectives a été entreprise pour examiner les implications de l'automatisation sur l'emploi. Malgré la diversité marquée des hypothèses et des approches méthodologiques, ces investigations ont révélé une intensification significative de ce phénomène et indiquent qu'il transcendera largement le simple cadre de la chaîne de production, modifiant de manière radicale les perspectives relatives aux types d'emplois requis dans le futur et le Maroc n'échappe pas à cette tendance lourde (Abbad and Boumahdi, 2022).



Cod e couleur correspond à la part des emplois potentiellement automatisables dans l'emploi total de la région par secteur : Vert foncé : <1% ; Vert clair : entre 1 et 3% ; Orange clair : entre 3 et 15% ; Orange foncé : entre 15 et 25% ; Rouge clair : entre 25 et 50% ; Rouge foncé : >50%

Figure 4: Prévalence régionale à l'automatisation 2013

Source: (« Direction des Études et des Prévisions financières | DEPF, » 2013)

Le rapport sur l'avenir de l'emploi 2023 du Forum Économique Mondial suggère que près d'un quart des emplois devraient changer au cours des cinq prochaines années, ce qui inclut 69 millions d'emplois créés et 83 millions supprimés. Les secteurs les plus touchés par ces changements seront l'industrie manufacturière, les services administratifs et le commerce de détail (The Future of Jobs Report 2023).

Les emplois à la croissance la plus rapide seront ceux liés aux technologies émergentes, telles que l'intelligence artificielle (IA), l'apprentissage automatique (ML), la cybersécurité et le commerce numérique. Ces emplois exigeront des compétences spécifiques, telles que la pensée analytique, la pensée créative et la culture technologique (Laurent, 2023). Les emplois dans les domaines de l'enseignement, de l'agriculture et des services sociaux devraient également connaître une croissance significative. Ces emplois exigeront des compétences générales, telles que la communication, le

travail d'équipe et la résolution de problèmes (The Future of Jobs Report 2023).

Les membres de la génération Z, qui représentent désormais la majorité de la population active au Maroc, ont des attentes uniques en matière d'emploi. Ils recherchent des emplois qui soient flexibles, rémunérés équitablement, et offrant des possibilités d'évolution. Dans la même perspective, les entreprises marocaines auront un besoin croissant de compétences spécifiques, des profils autodidactes avec une grande veille des besoins économiques et sociaux futurs avec également une élasticité mentale des profils qui additionnent une culture générale diversifiée et des compétences techniques spécifiées. Elle requiert également des professionnels capables de concevoir, d'utiliser et d'adapter, de maintenir, d'évoluer et d'innover dans un marché toujours plus concurrentiel, capable de se reconverter et de s'adapter à tout changement potentiel.

On passe de l'échelle de Turing à l'échelle de l'utilité donc avant de choisir un travail demandez-vous si une machine peut le faire, si oui, n'y investissez pas votre temps et votre énergie (Laurent, 2023). La machine pourra tout faire ou presque. Il devient alors nécessaire de bien choisir le positionnement de votre formation pour pouvoir intégrer le marché du travail plus sûrement. Les secteurs affichant la croissance la plus rapide sont intrinsèquement liés à la technologie et à la numérisation. Le Big Data se distingue en tant que technologie suscitant le plus d'anticipations en termes de création d'emplois, avec 65% des répondants prévoyant une croissance de l'emploi dans les domaines associés. Les fonctions telles que les analystes et scientifiques des données, les spécialistes du Big Data, les experts en intelligence artificielle et apprentissage automatique, ainsi que les professionnels de la cybersécurité sont projetées connaître une augmentation moyenne de 30% d'ici à 2027. La formation des travailleurs à l'utilisation de l'intelligence artificielle et du Big Data émerge comme une priorité pour 42% des entreprises interrogées au cours des cinq prochaines années, se positionnant ainsi derrière la pensée analytique (48%) et la pensée créative (43%) en termes d'importance. Notamment, le commerce numérique devrait être à l'origine de la plus significative augmentation absolue du nombre d'emplois, avec l'anticipation d'environ 2 millions de nouvelles fonctions digitales, telles que les experts du e-commerce, de la transformation digitale, ainsi que du marketing et de la stratégie numériques. (*The Future of Jobs Report 2023, 2023*)

Le gouvernement marocain quant à lui doit prendre des mesures pour aider les travailleurs à faire face à ces changements. Il peut investir dans l'éducation et la formation professionnelle pour préparer les travailleurs aux emplois de demain (Miraoui, 2021). Cela ne pourra se faire sans un projet social bien structuré qui pourra guider l'avancement technologique et justifier les dépenses et les investissements faits dans ce sens. Le gouvernement doit plus que jamais favoriser une société inclusive et prévenir les décrochages. Dans son infinie diversité, la jeunesse ne constitue ni un risque ni une contrainte pour l'institution, elle incarne au contraire sa richesse et sa prospérité.

En conclusion, l'avenir du marché du travail marocain est caractérisé par une transition vers des emplois plus qualifiés et plus technologiques. Les travailleurs devront s'adapter à ces changements en développant les compétences nécessaires pour les emplois de demain.

IV. CONCLUSION

En défendant la sacralité de la mission universitaire visant à former des citoyens éclairés dans un monde en constante mutation, il devient impératif d'insuffler une dynamique de compétitivité accrue sur le

marché du travail, tout en établissant une culture d'apprentissage et de veille tout au long de la vie. Pour répondre à l'impératif de pertinence de la version 4.0, l'université du 21^e siècle doit transcender des contenus de formation souvent dépassés, favoriser des approches pédagogiques innovantes, et intensifier son engagement avec les acteurs économiques. Elle doit également se positionner comme un épicerie actif, en symbiose avec son écosystème économique, politique et sociétal, tout en préservant sa raison d'être fondamentale: la qualité et l'intégrité du savoir académique, des remparts immuables dans un monde empreint d'incertitudes. L'éventualité de la substitution de l'humain par la machine au sein des entreprises sert les intérêts sociétaux plutôt que ceux de l'État, qui risque de se retrouver avec des citoyens marginaux, dépourvus de capacités de consommation. C'est dans ce contexte que la nécessité d'un contrôle politique sur l'intelligence artificielle émerge comme impérative.

En conclusion, le E-learning émerge comme un acteur essentiel dans l'évolution des professions au Maroc, en proposant une solution de formation flexible et accessible. La collaboration entre les secteurs de l'éducation, du gouvernement et de l'industrie est cruciale pour maximiser les bénéfices du E-learning et préparer la main-d'œuvre marocaine aux défis futurs. Les certifications en ligne, variées et accessibles, deviennent ainsi des outils privilégiés pour maintenir la compétitivité sur le marché de l'emploi. En somme, cet article encourage à repenser la nature du travail, de l'apprentissage et de l'adaptation dans un monde qui accorde une importance croissante à la productivité et à l'utilité. Il souligne la nécessité de se libérer des « bullshit jobs » tout en prenant activement en charge son propre développement professionnel, tout en valorisant le E-learning comme un complément essentiel à l'enseignement traditionnel.

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The study examines both perceived employability and the employability of hospitality industry hiring managers. The hospitality industry's turnover rate is much higher than the overall industry average. We investigate the relationship between hospitality job applicants' career motivation and perceived employability mediated through proactive career behavior.

Keywords: *perceived employability, employability, proactive career behavior, career motivation, career identity, career insight, career resilience, hospitality industry, qualitative method.*

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Job Seeker's Perceived Employability and Hiring Manager's Decision-Making in the Hospitality Industry

H. Michael Chung^α & Jieun Kim^α

Abstract- The relationship between job applicants' perceived employability and employers' actual hiring decisions is an important issue for both job applicants and hiring organizations, as well as higher education. Actual 'employability' is a set of skills and qualifications suitable for organizational job roles when hiring managers make decisions. However, most research heavily focuses on job applicants: the relationship among perceived employability, proactive career behavior, and career motivation. Little research has involved actual 'employability' from the perspective of hiring managers.

The study examines both perceived employability and the employability of hospitality industry hiring managers. The hospitality industry's turnover rate is much higher than the overall industry average. We investigate the relationship between hospitality job applicants' career motivation and perceived employability mediated through proactive career behavior. Then, we analyzed the qualitative data collected from the interviews with high-level human resources managers in luxury hotels.

The results confirm a positive relationship between career motivation and proactive career behavior. While not all components of career motivation directly influence perceived employability, proactive career behavior positively impacts perceived employability. Finally, the qualitative analysis found that career motivation and proactive career behavior, among other things, should be expanded to include the applicants' learning attitude and flexibility in various workplace roles.

Keywords: *perceived employability, employability, proactive career behavior, career motivation, career identity, career insight, career resilience, hospitality industry, qualitative method.*

1. INTRODUCTION

As the service economy grows exponentially, business employers and feeder organizations such as higher education have focused on employability. Analyzing the employers' employability assessment is critical to higher productivity and lower organizational turnover. Furthermore, the cost of high turnover and training new hires is significant in the service industry, particularly in the hospitality sector (Agovino, 2019). Shifting demographics, changing consumer expectations, and adopting new technologies

will make many traditional approaches less effective and relevant in the future.

The turnover rate in the leisure and hospitality industries was as high as 131%. The rate was 85% in 2021 and 82% in 2022. Compared to the average industry turnover rate of 47%, it is considerably high (Hansen, (2023), which also indicates that high turnover has negative consequences, such as lower team morale and damaged brand image. In addition, loss of organizational knowledge and cohesive culture negatively affect a firm's business performance (Robinson et al., 2014; Morrow & Mcelroy, 2007; Shen & Cannella, 2002). High employee turnover in the hospitality industry stems from a need to understand hospitality job strains better and the incongruence between job demand and employees' expectations (Park & Min, 2020). In particular, the reason behind such high employee turnover is related to proactive career behavior that can predict the employees' adaptability to careers and resilience against difficulties in the workplace (Nguyen et al., 2016; Hameed et al., 2020). In the hospitality industry, one of the critical challenges in recruiting is the job market competitiveness in recruiting highly skilled talents and retaining them (Ghani et al., 2022).

Employability is a set of skills and qualifications of a job applicant suitable for organizational job roles from a hiring decision-makers' perspective (Bollerot, 2001; Fugate et al., 2004). On the other hand, perceived employability is the perceived ability of a potential employee to obtain sustainable employment appropriate to one's qualifications (Rothwell et al., 2008; Wang et al., 2022). Thus, a clear understanding of employability is critical for employers, job seekers, and higher education institutions that educate and produce potential employees. Numerous studies have identified the antecedents of employability, which involve career motivation and proactive career behavior (Kuijpers et al., 2006; Vanhercke et al., 2014; Kim et al., 2015). However, the role of career motivation and proactive career behavior regarding employability should be clarified. Studies related to employability were mainly focused on perceived employability or a person's self-confidence about their future employment (Vanhercke et al., 2014). The criteria and the antecedents of perceived employability were tested mostly on potential job

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applicants (Caballero et al., 2021; Donald et al., 2019; Ho et al., 2022).

Therefore, more research needs to be reported on how perceived employability is related to 'actual' employability by hiring managers' decision-making. This study examines how perceived employability relates to actual employability in the hospitality industry. In particular, this study focuses on the relationship between perceived employability and actual employability concerning career motivation and proactive career behavior. Specific research questions for the study are:

1. How is perceived employability related to actual employability in the hospitality industry?
2. Can perceived employability be predicted by career motivation and proactive career behavior?
3. What is the relationship between career motivation and proactive career behavior?

Firstly, the study examines career insight, career identity, and career resilience as the components of career motivation that influence proactive career behavior. Secondly, we look into the impact of career motivation on perceived employability. Thirdly, the relationship between proactive career behavior and perceived employability is analyzed. Fourthly, the mediation effect of proactive career behavior on the relationship between career motivation and perceived employability is tested. Finally, following the quantitative analysis, a qualitative study based on in-depth interviews with the hiring managers examines the relationship between perceived employability and actual employability.

The following table shows the abbreviations used in the paper.

Table1: Variable Names by Abbreviation

Abbreviation	Variable Name
CM	Career Motivation
CID	Career Identity
CIN	Career Insight
CRE	Career Resilience
PCB	Proactive Career Behavior
PE	Perceived Employability
E	Employability

II. LITERATURE REVIEW

a) Career Motivation

Career motivation is an individual's traits of career identity, insight, and resilience toward career decisions (London, 1983; London & Noe, 1997; Opsata, 2020). Career identity is the degree to which people perceive their career as their identity. Career insight is the recognized motivation that makes people set up career goals and plans based on practical career-related information. Career resilience is an adaptation to various career situations regardless of obstacles.

Specifically, career identity is how individuals identify with their main career field. People with high career identity have a strong sense of the job associated with career development. Career insight is the ability to view current and future career opportunities and set career goals while having self-knowledge of one's strengths and weaknesses. Individuals with high career insight are willing to gather career-related information, explore opportunities, and develop obtainable career goals and plans to follow through. Career resilience refers to adapting to changing employment and business circumstances, even in unfavorable or obstructive situations (Kodama, 2017). Individuals with career resilience are self-confident to challenge new tasks or jobs and adapt to new work environments. They tend to develop their careers through acquiring new knowledge and skills (Mishra & McDonald, 2017). Career resilience can alleviate job adversity in changing work circumstances (Howard, 2008; Youssef & Luthans, 2007; Goethals, 2005). Career motivation influences an organization's affective commitment and job satisfaction (Alniacik et al., 2012; Wang et al., 2020).

b) Proactive Career Behavior

Proactive career behavior is an individual's approach to career management, such as career design and career-planning strategies (Verbruggen et al., 2007; Abele & Wiese, 2008). Proactive career behavior involves planning and executing career activities based on career goals (Broeck et al., 2016). It includes self-driven career development, such as practical activities to improve work competencies to uphold possible employment (Sturges et al., 2002). Proactive career behavior includes career management, skill development, and networking (Parker & Liao, 2016). Career management involves an insight into building up career goals and planning how to accomplish them. Skill development refers to the efforts to acquire knowledge and skills for career management. Networking is getting information and feedback for up-to-date information and planning strategies to accomplish career goals.

Organizational members with proactive career behavior show high job satisfaction (Hall et al., 2004). The individuals who developed their careers through networking show high performance, such as promotion and compensation, and higher subjective career success (Van Emmerik et al., 2006; Forret & Dougherty, 2004). Proactive career behavior is a significant aspect of the hospitality industry job since it can predict employees' adaptability to careers (Hameed et al., 2020) and resilience toward difficulties in the workplace (Nguyen et al., 2016). It also can lower turnover and increase career satisfaction (Chan & Mai, 2015).

c) Perceived Employability

Perceived employability indicates a person's perceived possibility of future employment by identifying career opportunities (Vanhercke et al., 2014).

Furthermore, it includes accepting transitioning to a new career if career circumstances change (Berntson & Marklund, 2007). Job seekers perceive employability based on the subjective appraisal of compatibility between employment conditions, knowledge, and skills (Ngo et al., 2017). Perceived employability is developed by confidence in their knowledge and skills, job opportunities, and adaptation capabilities toward their work environment. For college students, perceived employability is their belief of how likely they will be successful in the job market (Pitan & Muller, 2020). Students' perceived employability typically increases through classroom learning and utilizing the campus career development center (Tomlinson, 2017; Bridgstock et al., 2019). In addition, human capital can also help students enhance perceived employability (Caballero et al., 2021; Donald et al., 2019; Ho et al., 2022). Human capital consists of academic knowledge and skills for career, social networking for occupation, and cultural understanding.

III. MEDICATION EFFECT AND HYPOTHESIS DEVELOPMENT

a) Career Motivation and Proactive Career Behavior

Proactive behavior is an individual trait like proactive personality, personal initiative, and self-efficacy (Crant, 2000). Career motivation includes self-confidence, career goals, and positive affect, significantly influencing proactive career behavior (Hirschi et al., 2013). Career motivation includes self-confidence, career goals, and positive affect and significantly influences proactive career behavior (Hirschi et al., 2013). Creed et al. (2017) reported that goal-oriented individuals experience less stress because they encourage themselves to confront discrepancies between their current situation and career goals. Career insight is relevant to career goal setting and will likely precede the subjects' proactive career behavior (Clements & Kamau, 2018). Hu et al. (2016) reported that subjects with high career resilience are likely to have consistent, proactive career attitudes, although they may experience career-related adversity. Their fundamental principles guiding their career aspirations bolster their resilience amidst adversity and obstacles. According to Creed et al. (2017), subjects with high career goal commitment maintain their goals even if they experience challenges in employment, which is related to career resilience. In addition, proactive career behavior can be enhanced by a clear self-image of future work, (Strauss et al., 2012; Taber & Blankemeyer, 2015).

Based on the above arguments, the following hypotheses are developed:

Hypothesis 1: Career motivation significantly impacts proactive career behavior.

H1-1: Career identity makes a significantly positive impact on proactive career behavior.

H1-2: Career insight makes a significantly positive impact on proactive career behavior.

H1-3: Career resilience makes a significantly positive impact on proactive career behavior.

b) Career Motivation and Perceived Employability

According to Ngoma & Ntale (2016), career identity is a positive antecedent of perceived employability: The subjects with higher career identity encounter more opportunities and challenges for job competency. These experiences make them feel more confident about future employment. Career Insight, which facilitates planning how to accomplish individuals' career goals, involves career development learning, and this helps them improve employability (Bridgstock et al., 2019; Ho et al., 2022). Career insight consists of career activity planning for goal accomplishment and career development efforts like learning new skills (Bridgstock et al., 2019; Ho et al., 2022). Career insight facilitates individuals' initiatives to take internships, attend career fairs, and build career networks. It also helps them understand employment trends, which can increase their confidence about future employment. Career resilience helps individuals accept career-related difficulties (Abukhait et al., 2020). They will not quickly abandon their career goals even if they confront adversities in the job market and are likely to continue to develop job competencies that could lead to employability. Based on these arguments, the following hypotheses are developed:

Hypothesis 2: Career motivation makes a significantly positive impact on perceived employability.

H2-1: Career insight makes a significantly positive impact on perceived employability.

H2-2: Career identity makes a significantly positive impact on perceived employability.

H2-3: Career resilience makes a significantly positive impact on perceived employability.

c) Proactive Career Behavior and Perceived Employability

Perceived employability is enhanced by individual readiness for employment based on one's qualifications. For example, university students' skill development and network building for careers significantly impact their perceived future employability (Clements & Kamau, 2018). Furthermore, university students' proactive learning, career development, and communication skills significantly impacted perceived employability (Park et al., 2020). It shows that individuals proactively preparing for their careers have positive confidence in their future employability. A hypothesis for the relationship between proactive career behavior and perceived employability is developed as follows:

Hypothesis 3: Proactive career behavior significantly and positively impacts perceived employability.

d) *Mediation Effects of Proactive Career Behavior*

According to Crant (2000), proactive individuals can create a positive environment for their career performance. Job seekers' motivations, such as self-confidence, career goals, and positive affect, influence proactive career behavior (Hirschi et al., 2013). Creed et al. (2017) state that goal-oriented individuals encourage themselves to engage in proactive behavior and experience less distress when confronting the discrepancy between their current situation and career.

Barnett and Bradley (2007) report that proactive career behavior mediates the relationship between organizational support and career success. Ling et al. (2017) show that proactive career behavior mediates the relationship between work-life quality and subjective career success. In addition, proactive career behavior mediates the relationship between career management and career satisfaction (Ismail et al., 2016).

Previous studies show that proactive career behavior enhances the impact of positive perception on internal and external circumstances of an individual's career outcome. Therefore, proactive career behavior will likely mediate the relationship between career motivation and perceived employability. Based on this argument, the following hypotheses are developed:

Hypothesis 4: Proactive career behavior mediates the relationship between career motivation and perceived employability.

H4-1: Proactive career behavior mediates the relationship between career identity and perceived employability.

H4-2: Proactive career behavior mediates the relationship between career insight and perceived employability.

H4-3: Proactive career behavior mediates the relationship between career resilience and perceived employability.

e) *Qualitative Data Analysis*

The following hypothesis intends to explore any potential gap in the career motivation of perceived employability mediated through proactive career behavior. We examine the relationship between perceived employability and actual employability. We conducted in-depth interviews to analyze the relationship between the perceived employability of the job candidates reviewed in the above quantitative hypotheses and employers' hiring decision-making. The hypothesis is developed as follows:

Hypothesis 5: There is no difference between perceived employability and employability.

IV. RESEARCH METHODOLOGY

a) *Model*

Based on the propositions, we developed a conceptual model to describe the impact of career identity, career insight, and career resilience on perceived employability mediated through proactive career behavior, as shown in Figure 1.

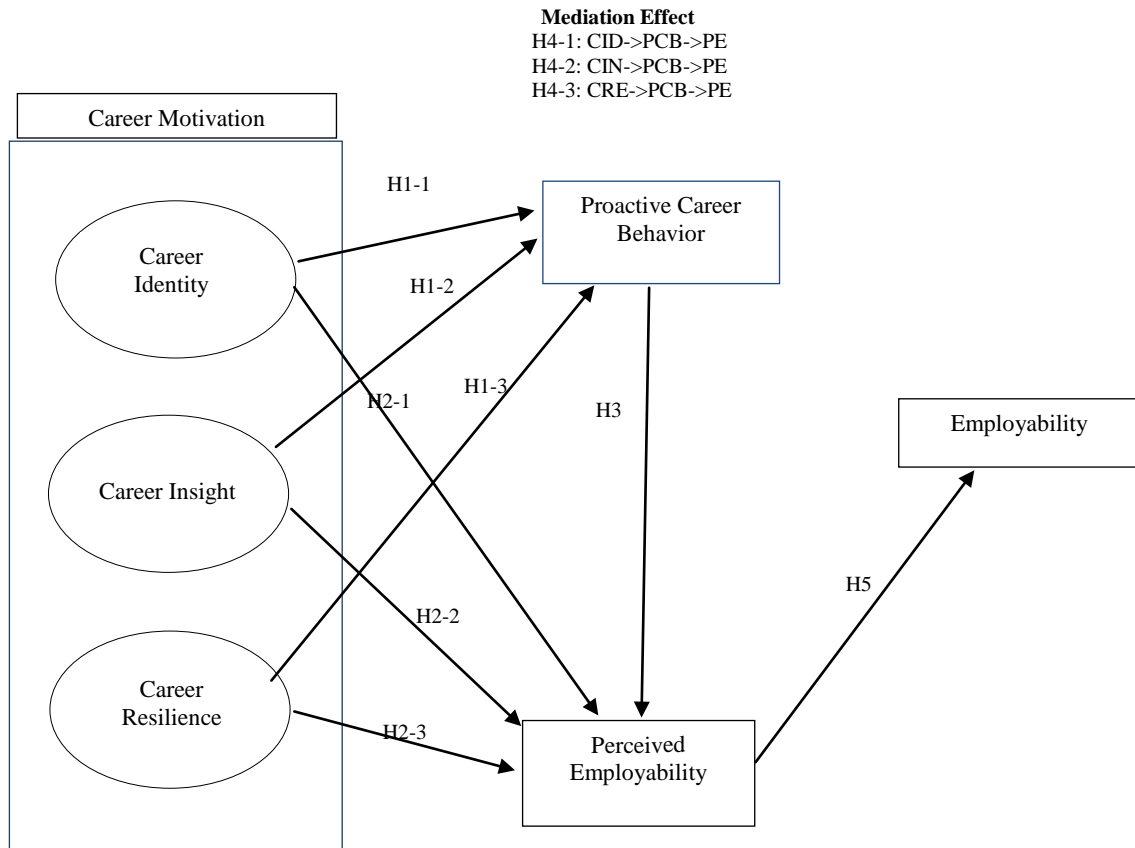


Figure 1: Conceptual Model

b) Instruments

Career motivation is an individual's motivation toward their career and consists of career identity, career insight, and career resilience (Noe et al., 1990; Bedeian, 1994; Carson & Bedeian, 1994; Opsata, 2020). Career identity includes items like 'my major career field is an important part of who I am.' Career insight includes items like 'I have a clear career goal.' A career resilience example is 'the costs associated with my career field seem too much.' The responses were given on a scale from 1 (totally disagree) to 7 (totally agree).

Proactive career behavior is a consistent engagement in career development to maintain one's employability based on individual career goals. It includes the acquisition of active information, knowledge, and skills development. The variables are measured using the five items in Smale et al. (2019). For example, 'I have discussed my career prospects with someone with more experience in the department or college.' The items are measured on a 7-point scale.

Perceived employability is an individual's confidence in future employment. Its measures are adapted from Kirves et al. (2014). A sample survey question is, 'Given my qualifications and experience, getting a job would not be hard.' The same Likert scale was used.

For a qualitative analysis, we conducted in-depth interviews to compare the relationship between

job applicants' perceived employability and employers' hiring decision-making.

In the in-depth interviews, we asked hiring managers how they made hiring decisions.

c) Data Collection

The study surveyed university students majoring in hospitality management at six universities located in three major cities in Korea. With a bachelor's degree in hospitality management, the subjects will work on a career in hotel management, food and beverage services, travel and tourism, event management, sports, wellness, and leisure-related jobs. Each respondent was informed of the confidentiality of the survey. A total of 251 responses were collected, and the cases with missing and ineligible values were eliminated. As a result, a total of 228 cases were used. SPSS Statistics 20.0 and AMOS 20.0 were applied to analyze the data. Frequency, reliability, confirmatory factor analysis, and correlation analysis were conducted to verify the study's validity and reliability. Finally, we used structural equation modeling to determine the relationship among the variables.

After the quantitative analysis, we conducted in-depth interviews with hospitality organization managers for a qualitative study. We interviewed seven senior managers about their perspectives on hiring decisions to examine the practical relationship between perceived employability and employability.

V. RESULTS

a) Demographic Information

As presented in Table 1, out of the 228 respondents, 46.9% are males (107 persons) and 53.1% are females (121 persons). The age distribution is 17 to 19, consisting of 14.9% (34 persons), 20 to 24 (53.1% with 121 persons), 25 to 29 (30.7% with 70 persons; and above 30 (1.3% with three persons).

Table 2: Result of the Demographic Analysis of the Respondents

Respondents' Characteristics	Items	Frequencies (%)	Respondents' Characteristics	Items	Frequencies (%)
Gender	Male	107 (46.9)	Grade Major/Department	Sophomore	47 (20.6)
	Female	121 (53.1)		Junior	67(29.4)
Age	17~19	34(14.9)		Senior	89(39.0)
	20~24	121(53.1)			
	25~29	70(30.7)			
	30 ~	3 (1.3)			
Total		228 (100)	The Total		228 (100)

b) Validity and Reliability

Cronbach's alpha coefficient was used to determine the measurement's reliability. As indicated in Table 3, Cronbach's alpha for each construct in the measurement model ranges from 0.735 to 0.799 and, thus, fulfills the cutoff; this value is adequate at ≥ 0.60 (Lee, 2006). Convergent validity is confirmed when the construct reliability value exceeds 0.7 (Kim, 2007).

Also, convergent validity is obtained as long as the standardized factor loading of all measures and the average variance extracted (AVE) is recommended to be above 0.5 (Fornell & Larcker, 1981).

Regarding construct reliability, the values of the five constructs range from 0.804 to 0.875, as seen in Table 3. A couple of items in each variable were eliminated since the standardized factor loading was not fit to satisfy the cutoff value of 0.5. Then, the standardized factor loading of all measures was moderate, ranging in value from 0.516 to 0.818. In addition, the AVE of each construct is above 0.528 and meets the condition.

These show that relevant measurement items adequately explained the designated underlying construct because it exceeds the cutoff of above 0.5, explaining construct validity (Kim, 2007). Further, each average variance extracted (AVE) reaches from 0.528 to 0.643. The confirmatory factor analysis (CFA) procedures can confirm whether the scales of psychometric properties are reasonably fit to extend beyond exploratory analytic technique (Noar, 2003). Further, CFA can add further information about the scale's dimensionality by testing various models against one another (Noar, 2003). CFA was completed with the maximum likelihood estimation. CFA was applied to all items, and a chi-square of 345.665, degree of freedom

(df) of 145, and p-value of 0.000 ($p < 0.001$). Further, the value in chi-square/df should be less than 3 to have overall goodness of fit (Kim, 2007). The value of chi-square/df shows 2.391, so the overall goodness of fit index (GFI) is accepted. In assessing the model fit, the following indices need to be fulfilled (Hooper et al., 2008): GFI (desirable at ≥ 0.90), Adjusted goodness of fit index (AGFI, desirable at ≥ 0.90), Root Mean Squar (RMR, desirable at ≤ 0.05 , acceptable at ≤ 0.08), Normed fit index (NFI, desirable at ≥ 0.90), Comparative fit index (CFI, desirable at ≥ 0.90), chi-square (desirable at < 0.05), Tucker-Lewis Index (TLI, desirable at ≥ 0.90), Root mean square of approximation (RMSEA) (very desirable at ≤ 0.05 and moderately desirable at < 0.08). Table 3 summarizes the outcome: NFI (0.837), AGFI (0.817), RMR (0.056), GFI (0.874), CFI (0.896), TLI (0.863), and RMSEA (0.078). While the relatively small sample sizes may limit the possibility of reaching the 0.9 cutoff value for some fit indices, it is acceptable (Marsh et al., 2004). As a result, the relationship among the suggested variables is considered a reasonable fit.

Table 3: Confirmatory Factor Analysis and Discriminant Validity

Factor	Item	Estimate	S.C.	T-value	P-value	Cronbach's α	CCR	AVE
Career Identity	CID1	1	0.654			0.780	0.870	0.643
	CID2	1.048	0.777	9.330	***			
	CID3	1.022	0.715	8.397	***			
Career Insight	CIN1	1	0.698			0.763	0.846	0.528
	CIN2	1.092	0.681	9.220	***			
	CIN3	0.867	0.598	7.942	***			
	CIN4	1.042	0.657	8.904	***			
	CIN5	0.860	0.537	7.230	***			
Career Resilience	CRE1	1	0.516			0.773	0.875	0.640
	CRE2	1.457	0.773	7.468	***			
	CRE3	1.151	0.671	7.001	***			
	CRE4	1.318	0.749	7.330	***			
Proactive Career Behavior	PCB1	1	0.685			0.799	0.843	0.543
	PCB2	0.792	0.579	9.616	***			
	PCB3	0.810	0.710	9.238	***			
	PCB4	0.817	0.559	7.547	***			
	PCB5	0.870	0.668	8.048	***			
Perceived Employability	PE1	1	0.562			0.735	0.804	0.583
	PE2	1.052	0.731	7.643	***			
	PE3	1.096	0.818	7.908	***			

***: 0.000 (r): reversed score, CCR: Composite construct reliability AVE: Average variance extracted
 χ^2 (df = 145) = 345.665 (p = 0.000), CMIN/df = 2.391, GFI = 0.874, AGFI = 0.817, RMR = 0.056, NFI = 0.837, CFI = 0.896, TLI = 0.863, RMSEA = 0.078

c) Correlation Matrix

The correlation coefficients presented in Table 4 vary from 0.367 to 0.769. Discriminant validity is secured

when the squared correlation exceeds AVE (Lee, 2006). The results of each squared correlation are below AVE, ensuring discriminant validity.

Table 4: Correlation Matrix between the Constructs

Variable	Means	S.D.	1	2	3	4	5
CID	4.017	0.591	1				
CIN	3.741	0.557	0.537*	1			
CRE	4.098	0.550	0.769**	0.537*	1		
PCB	3.571	0.615	0.606*	0.718*	0.402*	0.730*	
PE	3.615	0.673	0.468*	0.527*	0.367*	1	1

*Significant at *p<0.05, **significant at *p<0.01 S.D.: Standard Deviation

d) Hypotheses Testing

Results of Overall Measurement Model Testing: Table 5 summarizes the strength of the relationships among the constructs with path coefficients and overall goodness of model fit indices. The model presents an acceptable fit: Chi-square (df: 143) = 323.981 (p = 0.000), CMIN/df = 2.266, GFI = 0.879, AGFI = 0.822, RMR = 0.056, NFI = 0.848, TLI = 0.876, CFI = 0.865, RMSEA = 0.075.

Results of Hypothesis Testing: The path coefficients of each direct effect were computed to analyze the proposed hypotheses.

Hypothesis 1: Hypothesis 1-1, the impact of CID on PCB, has been supported with a path coefficient of 0.548 (t > 1.96, p < 0.001). Hypothesis 1-2, the impact of CIN on PCB, has been accepted; the test result shows a path coefficient of 0.707 (t > 1.96, p < 0.001). Hypothesis 1-3, the impact of CRE on PCB, has been accepted; the test result shows a path coefficient of 0.450 (t > 1.96, p < 0.001).

Hypothesis 2: Hypothesis 2-1, Explaining the impact of CID on PE, a path coefficient is 0.612 (t > 1.96, p < 0.001). Hypotheses 2-1, 2-2, and 2-3 have rejected the impacts of CID, CIN, and CRE on PE.

Hypothesis 3: Hypothesis 3, the impact of PCB on PE has been supported with a path coefficient of 0.874($t > 1.96$, $p < 0.001$).

Table 5: Parameter Estimate in Structural Model

Hypotheses	Path	S. C.	S. E.	T-value	P-value	Result
H1-1	CID-> PCB	0.548	0.249	2.513	*	Supported
H1-2	CIN-> PCB	0.707	0.143	5.980	***	Supported
H1-3	CRE-> PCB	0.450	0.305	2.303	*	Supported
H2-1	CID-> PE	0.612	0.612	1.525	0.127	Rejected
H2-2	CIIN-> PE	0.409	0.409	1.509	0.131	Rejected
H2-3	CRE-> PE	0.689	0.689	1.935	0.053	Rejected
H3	PCB-> PE	0.874	0.318	3.177	**	Supported
Fit Indices	x2 (df:143) =323.981, p=0.000, CMIN/df= 2.266, GFI= 0.879, AGFI=0.822, RMR=0.056, NFI=0.848, CFI= 0.906, TLI= 0.876, RMSEA= 0.075					
Significant at *** p <0.001, ** p<0.01 *p<0.05. S.C.: Standardized coefficient. S. E.: Standard Errors.						

Table 6 presents the mediation effect of proactive career behavior on the relationship between career motivation and perceived employability. For example, X and Y represent the independent variable and the dependent measure, respectively. The significance of X's direct effect on Y and the indirect effect through the mediation variable should be examined to examine the mediation effect (Rucker et al., 2011). If the indirect effect through the mediation variable is significantly supported regardless of the insignificant direct effect of X on Y, the mediation variable fully mediates the relationship between X and Y (Rucker et al., 2011). In contrast, if the direct effect of X on Y remains significant when the indirect effect is supported, the mediating variable makes a partial mediation effect for the relationship between X and Y (Rucker et al., 2011). Bootstrapping was employed to

analyze the direct impact. The results indicate that all direct effects of CID, CIN, and CRE on perceived employability have been rejected.

Hypothesis 4: H4-1, the mediation effect of PCB for the relationship between CID and PE was supported (path coefficient: 0.625 ($p < 0.05$)). H4-2, the mediation effect of PCB for the relationship between CIN and PE was supported (path coefficient: 0.807 ($p < 0.05$)). H4-3, the mediation effect of PCB for the relationship between CRE and PE was supported (path coefficient: 0.513 ($p < 0.05$)). As a result, PCB has a full mediation effect on the relationship between each sub-variable of career motivation and perceived employability. Career motivation can significantly influence perceived employability when job seekers' proactive career behavior intervenes.

Table 6: Result of Mediation Effect

Hypothesis	Direct (x->y)	Indirect	Result
H4-1:CID->PCB-> PE	0.612	0.625 [*]	Full Mediation
H4-2:CIN-> PCB-> PE	0.409	0.807 [*]	Full Mediation
H4-3:CRE-> PCB->PE	0.689	0.513 [*]	Full Mediation
significant at *p<0.05			

e) *Qualitative Analysis*

Numerous studies report the criteria and antecedents of perceived employability. They stated what could predict the potential job applicants' perception of future employability (e.g., Caballero et al., 2021; Donald et al., 2019; Ho et al., 2022). They also described the roles of current employees' perceived employability in organizational attitudes and behaviors (e.g., Silla et al., 2009; Acikgoz et al., 2016). However,

few examined whether the job applicants' perceived employability and antecedent variables will predict employability. To this end, this research conducted the qualitative study through in-depth interviews with the hiring managers who have rich hospitality work experiences as follows:

Following the quantitative study, in-depth interviews were conducted with hotel human resources managers. The interviewees have worked in the hotel

industry for at least ten years. The summary of the interview is presented in Table 7. The list below is the summary of the interview questions.

1. Do you care to what extent the job applicants are proactively engaged in networking for information seeking, knowledge, and skill development when hiring hospitality significant students?
2. If yes, what activities do you consider the most important? Prioritize the level of importance, and please explain why.
3. What effective program have you discovered or would like to recommend to enhance employability?
4. When the job applicants are confident about employment, would you like to hire them?
5. If yes or no, why?
6. Do you see any discrepancy in the performance of applicants/employees with high and low career motivations?

The summary of an interpretive analysis in Tables 8 and 9 presents the key themes of hiring managers' decision-making. These key themes include job seekers' career motivation, proactive career behavior, and perceived employability, which were reported in the prior literature and the results of the above quantitative analysis.

On the other hand, an interpretive analysis reveals the relative importance of work experience over language and computer skills. Moreover, it emphasizes communication skills, human relationship skills, upbeat personality, modesty, fast learning, and organizational adaptation on top of perceived employability, networking, and information seeking. They emphasized an organizational fit of new hires.

Such findings discovered through an interpretive analysis enrich the quantitative studies and help expand the scope of career motivation, proactive career behavior, and perceived employability.

Table 7: Interviewee Profile

Hotels in Major Cities	Job Title	Career Duration involving hiring
LUXURY HOTEL	Director of Room Division	About 20 years
LUXURY HOTEL	Training Manager	About 12 years
LUXURY HOTEL	General Manager	About 35 years
LUXURY HOTEL	Director of Sales and Marketing	About 15 years
LUXURY HOTEL	HR Director	About 20 years
LUXURY HOTEL	Director of Sales & Marketing,	About 28 years
LUXURY HOTEL	Manager of Purchasing Department	About ten years

Table 8: Summary of Interview Transcripts

Interviewee	Consistent Line with the Quantitative Study Results	Unclear Aspects
1 st Interviewee	Applicants should make efforts to seek information about the jobs and careers they apply for. Knowledge and skill development are considered to be very important. It is very important to understand what hoteliers do. These indicate that information gathering through networking and skill development in proactive career behavior are integral elements for employment and support the study result.	Job applicants' perceived employ-ability is not enough to be willingly hired in the hotel industry. We need to see whether PE is engaged with a positive learning attitude toward various hotel job positions and confidence in managing their careers in multiple departments in the hotel business. This means perceived employability could be the antecedent of real employability; however, the essence of confidence needs to be examined.
	Employees with high career motivation perform well, such as in customer satisfaction, low turnover, and sales records. Therefore, career motivation is considered a matter of interest when hiring employees. This supports this study's finding of the significant role of career motivation.	
2 nd Interviewee	The job applicants need to understand their roles in the hotel industry and have the knowledge and	Perceived employability does not always mean employability. We try to verify whether such PE comes from a

	<p>skills needed for employment. For example, they need to actively find out what the hotel industry is and what is needed to be a qualified hotelier. Further, various hotel internships and hospitality job experiences are recommended. This supports this study's result of the positively significant impact of proactive career behaviors on perceived employability.</p>	<p>confident learning attitude. For example, applicants need to present whether they can accept learning new skills they do not apply for. That is, if the applicants are willing to work in any department in the hotel organization with a positive learning attitude, we consider hiring.</p>
		<p>Career motivation conditionally influences employability because it does not always mean the antecedent of performance. We consider performance to be communication skills, relationships with others, and a positive learning attitude. Therefore, applicants with career motivation are welcomed. However, their career motivation should be congruent with our career development process, and their career goal needs to be balanced with organizational goals. It says career motivation is an essential concept for employability, but such career motivation should be interlinked with organizational perspectives. Therefore, the applicants' career motivation would be compelling when the hotel's career development process and organizational goals are congruent with it.</p>
3 rd Interviewee	<p>Job applicants' proactive career behaviors tell us whether they are qualified. Specifically, they need to prove they understand the jobs they applied for and have certificates of job skills like sommelier, chef, language, etc. It supports this study's result of the significant impact of proactive career behaviors on PE. Specifically, information-seeking and skill development of proactive career behaviors are integral parts of employability.</p>	<p>Perceived employability is essential; however, we try to verify whether it is superiority or a balance of confidence and modesty. Their perceived employability should not stem from superior qualifications but from the utmost efforts to fit hotel positions. Otherwise, the employment results in high turnover or conflict with others. This indicates that the impact of proactive career behaviors on PE should be fulfilled based on the integration of confidence and modesty.</p>
	<p>Career motivation is considered important because applicants with high motivation show a good level of ownership, responsibility, and passion for job skill acquisition. This supports this study's conclusion that career motivation plays a significant role in PE.</p>	
	<p>Applicants with high PE are preferred. This means that those with a high PE level are more positively considered for employment decisions than those with low perceived employability.</p>	
4 th Interviewee	<p>Work experiences in the hospitality industry, including internships and part-time jobs, are important factors</p>	<p>Certificates to prove knowledge and skills are not a priority because they cannot prove their adaptation to the</p>

	<p>when deciding employment. When considering turnover, it is important to know whether the candidates are aware of job traits and the low salary of entry-level positions.</p>	<p>working environment. Networking and information-seeking are not critical factors.</p>
	<p>If they are qualified enough, we hire them.</p>	<p>We do not hire if the reasons for perceived employability are unmet with the required qualifications.</p>
	<p>We see a passion for learning all the skills needed in the hotel industry. When they have such motivation, they learn fast. We look for personnel who are willing to accept and challenge new skills and knowledge with motivation.</p>	
5 th Interviewee	<p>We find out whether they have any working experience in the hospitality industry. This tells us whether they have had proactive career behaviors. We also seek soft skills like a service-oriented attitude and an upbeat personality.</p>	<p>Networking, information seeking, and knowledge and skills without practical work experience are not priorities.</p>
	<p>We see their passion for a career in the hospitality industry.</p>	<p>We do not need to see their confidence in their employment.</p>
	<p>Motivation for a hospitality career is very important for hiring decisions. Specifically, we try to figure out their belief about their job fit in the hospitality industry (career identity) and clear goal approach (career insight). Highly motivated employees have shown low turnover and a hospitality-oriented attitude.</p>	
6 th Interviewee	<p>Those activities could be better than non-proactive behaviors. However, the critical proactive behaviors for hospitality employment should be defined as understanding hospitality jobs and job fit based on practical work experiences. Language and communication skills development are essential.</p>	
	<p>We consider turnover rate one of the performance perspectives. Motivated employees show more responsibility when quitting jobs. We like to have passionate employees, but we like to prove whether their passion is interrelated with a warm heart for people. In addition, motivation can be figured out through their interview answers about the job position they applied for and their readiness to learn exact skills with the fewest mistakes.</p>	
	<p>We care about the knowledge and skill development needed for the job positions they applied for. For example, if they apply for a position in the purchasing department, they must have computer and communication skills.</p>	



7 th Interviewee	As long as perceived employ-ability comes from real qualifications that fit the jobs they applied for, we consider it positively.	
	Performance means fast learning and adaptation to organizations. Highly motivated employees mostly show high performance.	

Table 9: Summary of Interpretive Analysis of Interview Transcript

Themes	Frequency	Remarks
Proactive career behavior	11	Essential activities for career and employment
Knowledge and skills Foreign language skill Computer skill	9	Needed but practical working experiences are more important
Career motivation	18	Very important for employment, but individual job fit and readiness to adapt to the organizational atmosphere should be accompanied
Perceived employability along with confidence	6	Efforts for employment like various certificates are reasonable, but demonstrating a continuous learning attitude is more important
Perceived employability along with a positive learning attitude in various job demands	4	Learning attitude is sometimes more important than knowledge and skills for employment
Job performance measures include communication skills, human relationship skills, positive personality, modesty, fast learning and adaptation to the organization	6	These are the indicators of job performance. Looking for fast learners who are quick at adapting to an organizational atmosphere Check if hotel employees need to work a variety of job roles
Turnover	3	Important to predict low turnover intention
Practical work experience	6	Work experience is more important than knowledge, skills, and other certificates. This is the most crucial factor to be hired.
Networking, information seeking	8	Need networking to understand the hospitality industry and jobs How proactively an applicant tries to understand the hospitality industry and jobs.
Job ownership, responsibility, passion	1	Essential factors for organizational performance

VI. DISCUSSION

In the quantitative survey, we examined

1. Career motivation has a positive relationship with proactive career behavior,
2. Career motivation has a positive relationship with perceived employability,
3. Proactive career behavior has a positive relationship with perceived employability.
4. We investigated whether proactive career behavior mediates the relationship between career motivation and perceived employability.

First, the results confirm the relationship between the components of career motivation (i.e., career identity, career insight, and career resilience) and proactive career behavior. In particular, the impact of career insight is the most significant among the components of career motivation. As Hirschi et al. (2013) and Opsata (2020) mentioned, self-efficacy and control over their careers encourage such attitudes.

Career insight is one of the essential antecedents of proactive career behavior. Career identity and career resilience also contribute to enhancing competencies and thus boost job seekers' chances of employment. Such results are in line with the prior literature.

However, the results show no significant relationship between career motivation (i.e., career identity, career insight, and career resilience) and perceived employability. Career motivation does not directly impact job seekers' perceived employability, which is different from previous studies. This means that to enhance job seekers' confidence in employment, more than their career motivation is needed; other factors must also be investigated. Second, the subjects' proactive career behavior influences their career motivation. When job seekers proactively explore career opportunities through networking and develop job competencies, they gain confidence consistent with the prior studies. Third, proactive career behavior mediates the relationship between the components of career

motivation, specifically career identity, career insight, and career resilience.

The quantitative study results summarize that career motivation positively influences proactive career behavior, and proactive career behavior mediates the relationship between career motivation and perceived employability. It is consistent with prior findings. However, there is no direct relationship between career motivation and perceived employability.

In the qualitative study, the roles of career motivation and proactive career behavior for employment are highly relevant. The job applicants' knowledge and skill development, as well as their understanding of job requirements, are, in fact, significant interests for hiring managers.

The qualitative analysis shows that employability considers job fit and adaptability to organizational needs. Job experience is critical for hiring decisions. Hiring managers pay particular attention to job applicants' motivation, learning attitude, and willingness to learn and accept a variety of job roles. In proactive career behavior, the significance of knowledge and skill development is in line with the quantitative study, but hiring managers emphasize practical experience.

Career motivation should also include a positive learning attitude toward acquiring new skills and a willingness to adapt to various job requirements. In addition, the applicant's career goals must fit organizational needs and expectations. On the other hand, overconfidence in an individual can be undesirable since it may result in high turnover or conflict with others. Finally, it is essential to align their career motivation with organizational viewpoints. While high career motivation is viewed as a positive factor in employment decisions, it is crucial for career goals and plans to fit into the organizational culture.

VII. CONCLUSION

This study investigated the relationships between career motivation, proactive career behavior, and perceived employability and their effects on hiring decisions in the hospitality industry.

The findings in the quantitative analysis present that career identity, career insight, and career resilience positively influence perceived career behavior and that perceived employability can be positively affected by proactive career behavior as well. However, career identity, career insight, and career resilience can enhance hospitality job applicants' perceived employability when proactive career behavior mediates the relationships. The results shed light on how to enhance subjects' job competencies.

However, in the qualitative part, employability would be affected by the learning attitude and the willingness to accept various job roles. The qualitative

analysis shows that career motivation, a positive learning attitude, and acceptance and adaptability in various job roles significantly correlate with employability.

The study has several theoretical contributions. First, it confirms the positive effects of critical dimensions of career motivation (i.e., career identity, career insight, and career resilience) as the antecedents of job applicants' proactive career behavior. Second, it proved a positive relationship between proactive career behavior and perceived employability. Third, career motivation (i.e., career identity, career insight, and career resilience) are the antecedents of perceived employability when proactive career behavior intervenes. Finally, the study leads us to understand better how behavioral factor positively affects job seekers and their proactive career behavior.

The mediation effect of proactive career behaviors suggests that proactive career behaviors explain the relationship between career motivation and perceived employability. It implies that highly motivated individuals engage in proactive behaviors, enhancing their perceived employability.

Practically, the study's findings suggest that career motivation should be enhanced to encourage job seekers to be proactive about their careers. For example, individual characteristics, work experiences, self-efficacy, and goal-setting can enhance career motivation (Stringer & Kerpelman, 2010; Mishra & McDonald, 2017; Clements & Camau, 2018). Proactive career behavior is a significant mechanism that makes career motivation effective for perceived employability. Self-efficacy can enhance career exploration behavior (Sheu, 2023), and career goal commitment boosts job seekers' proactive career behavior (Clements & Camau, 2018). Higher education may need to help students develop an attitude toward new knowledge, skill development, and dynamic and fast changes in the service business.

The study's limitations include only interviewing seven hiring managers in the hotel industry, which may be further extended to involve more hiring managers. Future studies need to confirm and discuss whether perceived employment and a positive learning attitude significantly influence employability. Moreover, artificial intelligence could assist hiring by screening resumes and pre-assessing candidates (Spa executive, 2023). Future studies can explore that artificial intelligence significantly increases the likelihood of hiring matched employees with desirable attitudes and job fit.

APPENDIX

	1	2	3	4	5	6
1 st Interviewee	Yes. Many employees request trans-ferring to another department or quit their jobs because they say the hotel jobs are different from what they thought. Therefore, proactive career behaviors indicate whether they understand that hotel jobs are essential for employment decisions.	Knowledge and Skills because they make them trained faster.	Practical training, field trip of sites.	Yes	Not applicable(N/A)	Yes. The ones with high motivation show high sales reports, communication skills, customer service, satisfaction, and low turnover.
2 nd Interviewee	Yes. What applicants have done to be employed in the hospitality industry is very important. This mean means they understand their business and jobs.	We think Work experience and attitude to accept any job are the most important factors. This is not included in your activities.	Training of communication skills, service manner, and organizational culture of the hospitality industry	Yes, but the confidence should include humility, flexibility, and a positive learning attitude.	N/A	Yes, but they should have a good relationship with people, a positive learning attitude, and pace control of career motivation with the career development stage within the organization.
3 rd Interviewee	Yes, proactive career behaviors indicate qualifications to work.	Knowledge and skills like language and various certificates, and job understanding.	Communication skills, service manner, and opportunity to experience overseas countries.s	Yes, but we examine whether PE comes from readiness to work or the superiority of their over-qualification. If it comes from the latter, we don't hire	N/A	Yes, they have a responsibility, passion for learning, high sales perform-mance, guest satisfaction, and adaptation to work.
4 th Interviewee	Yes. Work experiences in the hospitality industry, including internships and part-time jobs, are important factors when deciding employment. When considering turnover, it is important to know whether they are aware of job traits and the low salary of entry-level positions. Certificates to prove knowledge and skills are not a priority because they cannot prove their adaptation to the working environment. Networking and information-seeking are not critical factors.	We check whether they have any working experience in the hospitality industry. We can predict their adaptability to their jobs through their work experiences.	Basic knowledge and theories in the hospitality industry. After hiring, we have to teach them from A to Z because most of them do not have sufficient basic concepts about hospitality jobs.	Yes. If they are qualified enough, we hire them. However, we do not if such confidence is not met with the needed qualifications.	N/A	We see a passion for learning all the skills needed in the hotel industry. When they have such motivation, they learn fast. We look for personnel who are willing to accept and challenge new skills and knowledge with motivation.

5 th Interviewee	Yes, we do.	We find out whether they have any working experience in the hospitality industry. This tells us whether they had proactive career behaviors. We also seek high soft skills like a service-oriented attitude and positive personality.	Universities need to make their students understand hospitality jobs and career stages in depth.	N/A	No. We need to see their confidence. We see their passion for a career in the hospitality industry.	Motivation for a hospitality career is very important for hiring decisions. Specifically, we try to figure out their belief about their job fit in the hospitality industry (career identity) and clear goal approach (career insight). Highly motivated employees have shown low turnover and a hospitality-oriented attitude.
6 th Interviewee	Those activities could be better than non-proactive behaviors.	Understanding of hospitality jobs and job fit based on practical work experiences. Further, fluent foreign language skills and other qualifications like computer skills.	More opportunities to be enrolled in practical training.	N/A	No. We need to see their confidence. We see their passion for a career in the hospitality industry.	We consider turnover rate one of the performance perspectives. Motivated employees show more responsibility when quitting jobs. We like to have passionate employees, but we like to prove whether their passion is interrelated with a warm heart for people. In addition, motivation can be figured out through their interview answers about the job position they applied for and their readiness to learn exact skills with the fewest mistakes.
7 th Interviewee	Yes	Wee specially care about the knowledge and skill development needed for the positions they applied.	Any program can improve basic manners and attitudes.	It is okay as long as the confidence comes from real qualifications that fit the jobs they applied for.	N/A	Performance means fast learning and adaptation to organizations. Highly motivated employees mostly show high performance.

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Legal Analysis on the Challenges of Cottage Industries in Bangladesh: Ways towards Revival Aftermath the COVID-19 Pandemic

By Sadia Binte Rahman

Abstract- The concept of small-scale industry is derived from cottage industries that reflect the cultural phenomenon of Bangladesh, comprising the contribution to Gross Domestic Product (GDP) proportion. The objective of the paper is to understand the challenges this sector is facing in the post COVID-19 pandemic phase to revive the sector. The gross impact on this sector for pandemic and post pandemic eras have been evaluated using secondary literature and first-hand data accumulated from several interviews. Therefore, the study of consistent national and international legislations handed over an apparent interpretation which indicates where the escape clauses are, what needs to be amended and incorporated with the purpose of revival. The findings and recommendations that are outlined here give a proper direction of undertakings by the authorities. Therefore, the given indication might allow us to dignify the glory of this sectorevolving our social-economic and cultural life.

Keywords: *cottage industries, COVID-19, revival, challenges, legal analysis.*

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Abstract- The concept of small-scale industry is derived from cottage industries that reflect the cultural phenomenon of Bangladesh, comprising the contribution to Gross Domestic Product (GDP) proportion. The objective of the paper is to understand the challenges this sector is facing in the post COVID-19 pandemic phase to revive the sector. The gross impact on this sector for pandemic and post pandemic eras have been evaluated using secondary literature and first-hand data accumulated from several interviews. Therefore, the study of consistent national and international legislations handed over an apparent interpretation which indicates where the escape clauses are, what needs to be amended and incorporated with the purpose of revival. The findings and recommendations that are outlined here give a proper direction of undertakings by the authorities. Therefore, the given indication might allow us to dignify the glory of this sector evolving our social-economic and cultural life. Study that acknowledges the cottage industries as a part of our heritage that has been affected due to COVID-19 spot, the following challenges impedes the revival of the sector in post pandemic; here the legal and institutional arrangements may lead towards a better revival phase.

Keywords: cottage industries, COVID-19, revival, challenges, legal analysis.

I. INTRODUCTION

In Bangladesh, the cottage industries carry the value of our culture, our long-term tradition. The protection and promotion of this sector not only bears the traditional aspect, also it allows a respectable number of employment opportunities. Even our constitution also encouraged the peasants and workers within rural development. The COVID-19 pandemic has interrupted all our undertakings and policies including the governmental, administrative, education and business which are unsatisfactorily affected. Some of the business is trying to resume their work, and the revival of this sector faces some challenges. This sector of Micro, Small and Medium Enterprises (MSMEs) have massively collided with the COVID-19 crisis; surveys indicated that more than two-third of MSMEs would be folding their relevant businesses within four-months due to the loss of their line of work. This particular conferred to economy and business for a large sector in consequence be entitled acting towards with dignity and respect within the support in their justifiable urge to

pursue and expand their business. As according to the Sustainable Development Goals in 2015, the MSMEs encompass therein and are worthy of constant subsistence from every stage (Berkel and Zaman 2020). Thus, their revival in the post COVID-19 era has been challenging yet to a part of major significance. This paper has studied those relevant legal social economics vulnerabilities of this sector, recommending some reforms and eradication of the challenges to revive this sector, to promote our tradition in the cause of global pandemic and afterwards. In India, they are already able to re-evaluate their revival of some of the cottage industrial products before this pandemic era could come and diminish this sector. Their Punjab's phulkari embroidery, woven drawstrings have been a featured form which was eventually disappearing, and they started ground working in 2019. (Shukla, 2019). So, here in Bangladesh what are the challenges, the sufferings and what the policy makers have initiated for them was needed to maintain properly the cottage industries are the most impactful sector in terms of trade and commerce that involves several rural employment factors having worldwide demands of these products.

The COVID-19 circumstances made the lives miserable, so as the effect upon the businesses. It needs proper attention and monitoring to eradicate the challenges and revive the sector. As Bangladeshi, it is the obligation to uphold the dignity of this sector that recognizes these products in the international market by contributing to our economy. From a rural practice that let them come to cover urban markets with sophisticated products, includes a good number of employment opportunities deriving towards the country's economic development urges to work over this sector more. (Tasneem & Biswas, 2014).

II. STATEMENT OF THE PROBLEM

This is a complex problem that requires some measures to simplify that the cottage industries in Bangladesh are sustaining a certain circumstance with their employment pattern in this pandemic situation needs undertakings for its revival in the subsequent condition. Identifying their challenges of rejuvenation with existing legal ruling-regulation, institutional support refers to what protection this sector has, what it does not

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and what is an urge to initiate in the post pandemic circumstances. Evolving from the 18th century and now turning to be the biggest industry in Bangladesh, they are in their way towards contributing to SDG goals, it possesses more than 18% of employment opportunity, the women are more benefitted through greater spare; thus, its revival is a necessity. (Hossain & Mohammed, 2019).

III. RATIONALE OF THE PROBLEM

These issues with cottage industries conferred to economy and business for a large sector in consequence are entitled acting towards with dignity and respect within the support in their justifiable urge to pursue and expand their business. The pandemic slowed their regular flow of work, or somewhere this has been paused for a prolonged period. This pandemic is causing terrible loss in this sector, to prevent them and allow them to be brought around will not only promote this sector, along with protecting the rights of the people with a view to economic significance. Thus, working on the challenges they are facing with a concept of reviving the sector is the utmost work and a need of the present time. The reviving is not an uncomplicated piece of work, it is obstructed by some major challenges. Therefore, eradicating the challenges with legal and policy reservations shall avail to elevate these businesses again.

IV. QUESTIONS OF THE STUDY

- What are the challenges that the cottage industries have faced in the post COVID-19 pandemic in Bangladesh?
- To what extent the revival of this sector is feasible through legal and institutional assistance?

V. OBJECTIVES OF THE STUDY

- To identify the challenges that cottage industries have faced in the post COVID-19 pandemic in Bangladesh
- To analyse the extent of revival through legal and institutional assistance of this sector.

VI. BRIEF LITERATURE REVIEW

The introductory initiative of such industries was confined to garment making, sewing in England and the United States. In our sub continent, the Moroccan traveller IBN Batuta with his understanding of our 'muslin' clothing which is one of the best products in the zone of cottage industries established as the leading part. In the Mughal period, this industry was not backed by the government, later the East India Company used these products for exporting. They also took steps whenever they were moving from the subcontinent suppressing these businesses. After the partition in

1947, Bangladesh underwent a loss in this sector as many people were deported being involved into this business. In East Pakistan, they initiated a step to improve this sector in 1957 through The East Pakistan Small and Cottage Industries Corporation (EPSIC), after the liberation war that was damaged severely. Then, Bangladesh Government stepped towards revitalising this sector, consequently the EPSIC was recreated by Bangladesh Small and Cottage Industrial Corporation (BSCIC) by means of ensuring the financial and-infrastructure assistance to this sector. According to numeral surveys by the last few years it produced employment probabilities for 40 thousand people engaging in this sector. It started evolving in 18th century and now turned out the biggest industry in Bangladesh, they are way towards contributing to Sustainable Development Goals (SDG) (Hossain & Mohammed, 2019).

Referring to the intellectual value of this sector, these intellectual property rights and cottage industrial products have an undeviating connection. With the implementation of intellectual property law these sectors will obtain a stronger protection. The intellectual property rights issue is another tool here permitting this sector a large scale of protection from any sort of infringements. In Bangladesh last year after the Small and Medium Enterprise (SME) foundation fair, it was urged to make the registration process easier, less costly and digitalized for cottage industrial products sheltering it from piracy. (The Daily Star, 2019)

The COVID-19 situation injured the small businesses, including in the CMSMEs, that is eventually scaling down and the social distancing-stay home motion caused them to be temporarily closed. Thus, these businesses of Bangladesh are already facing vulnerabilities. Some recommendations such as reconstructing the sector with some survival strategies and then equipping them to recover, the policy-based support-fiscal support-financial support mechanisms and support for the women entrepreneurs can work towards development. The Interest free loans to the small and medium women enterprises, the higher allocation of stimulus funds can be initiated. (Mahmud, 2020).

The COVID-19 impacted the small-scaled industries through disruption of business through holding the export activities, declining the foreign direct investment, reduction of earning and over all the slowdown of this sector. It affected the labour market too. (UN Bangladesh, 2020). As far the state obligation the report from the Financial Express where 200 billion soft loan to the micro, small and cottage industries were provided by the Government in May, 2020 due to their substantial loss in the current pandemic. The interest rate and the distribution was quite in favour of this sector that is all round 70 percent out of 100. The Federation of Bangladesh Chambers of Commerce and Industry

(FBCCI) has called for moderation of the terms and conditions for disbursing loans so that every sector, especially the, micro and small businesses therefore. Focus has also been given to the Trade Associations and Central Bank schemes so that they may comfortably reach out to them. This report mentioned nearly four million small businesses where the cottage industries include and the Credit Guarantee Scheme is given importance for this zone. The SME foundation also depends upon this as there is a possibility that this sector can be left out due to this pandemic where the central and other banks can put a contribution (Ahmed, 2020).

Some monetary steps have been taken as well, Bangladesh Small and Cottage Industries (BSCIC) said Tk 131.14 crore has been distributed under the government stimulus package announced during the coronavirus pandemic, the money was distributed among 602 cottage, micro, small and medium enterprises (UNB News, 2020). The Ministry of Industries has sought Tk 1,100 crore as seed money for the small entrepreneurs who remain outside the banking system and cannot avail funds from the stimulus package. Their 500 crores will be for small and medium enterprises and BSCIC will execute the rest 600 crore for the cottage industries. (UNB News, 2020) Exploring the project of Needs Assessment Working Group their analysis for the small and medium industries that the government has laid out tk 20,000 crore as working capital along with the banks furnishing the loans with minimal interest rate. The refinancing schemes with some waivers on government rents, utility bills, VAT, SD etc. market support access, international funding are as in the place of recommendation. (NAWG, 2020).

National Association of Small and Cottage Industries of Bangladesh (NASCIB) organized a workshop to boost up the relevant sectors, where the output came as the cottage industrial sector as facing interruptions in their business, many of them could not pay the rents; production losses, product marketing issues, production cost increasing, not receiving funds in a proper way these are the factors that were raised there (Financial Express, 2021). A survey made by Dhaka Chamber of Commerce and Industry (DCCI) indicates 59 per cent of the CMSMEs are having issues to get the banking fund, 18 percent are unbanked, trade licensing is another issue. Entrepreneurship should be promoted, activism of Microfinance institutions should be more active, agent banking system should be added to overcome this post pandemic spot (Anik & Akhand, 2021). The proposal of the governmental that the ICT-based capacity building for women entrepreneurs covering the digital, virtual, and mobile-based business training, coaching, and mentoring pertinent to economic recovery, digital marketing and communication channels, with digital financial literacy can be a great addition for this sector. But the policies should not be

rigorous; otherwise the objective of revival shall lag behind (Mahmud 2020).

The relevant literature is focused on the funding allocated for this sector, through Governmental initiative or any other foreign funding. There are multiple genres of businesses, and this pandemic caused funding requirements for all of them, there the cottage industries are coming by the equivalent support or not with mentioning the intellectual value of this sector as well. The policies mentioned in articles whether all of them or either one of them has been implemented, and no specification of how the outcome was thereof.

VII. METHODOLOGY

This research required the analysis and some numerical data, but mostly the analysis of challenges, legal and institutional frameworks where it specified doctrinal research, where the author has incorporated both qualitative and quantitative data. In case of categorising the doctrinal research, it falls under fundamental research as it has analysed some social and economic facets.

1. Rationale Behind this Method- The title of this paper ascertains about the analysis of challenges that obstruct the revival of the cottage industries in COVID-19 pandemic. At this point primary data of legal policies are needed; also, the secondary data of the analysis of literatures and some of the survey-focused group discussion-interviews with the workers are essential part of this paper
2. Data Source and Data Type- The sources mentioned here, overall come from legislation and policy analysis, different literatures, articles, newspaper reports with some of the interviews of the sector workers. The secondary data of literatures, policies has covered the portion and primary data of legal and other documents shall collaborate to get the theme of legal analysis within the bounds of thesis title. The village women, men or persons involved with this industrial sector had been questioned to make a survey. Along with, if possible, an interview with the relevant sector's official would have supported more.
3. Data Analysis- Both the data were analysed in a way that, the secondary data where the other authors' attitude-their analyses have indicated the gap in those literatures with some of the pertinent directions. The primary data of legislation and policies and the information from the interviews where the material provisions, chapters has been analysed to find the escape clauses and necessary alterations and modifications ascribed to corona pandemic.

In time of taking the primary data from the workers involved in this sector, the safety measures

were followed, and the strict precautions of COVID-19 were maintained.

VIII. SCOPE AND LIMITATIONS OF THE PAPER

The Medium and Small Enterprises (MSE) are well-received in our country where the opportunity of self-employment is emphasised in fuller sense. The handicrafts, Jute-Bamboo products, local goods, the jamdani-muslin-silk work are all our traditional cottage industrial products. A suitable number of people are entailed in this sector. The scope has covered the various areas of cottage industries in Bangladesh, their prior traditional business pattern, their adaptation due to COVID-19 pandemic along with the challenges they fight for reviving their sector which are already suffering or ending. The analysis of legal instruments concerning this sector and the necessary policies adopted by the Government or administrative body to explore how their rights are protected-instructed- compensated within rules and what should be included to revive this sector in the post pandemic era. This is all around a study on the way towards eradicating the challenges that the sector is facing, signifying the revival from the perspective of Bangladesh.

The inclusion part of this paper refers to the challenges that this sector is facing till the pandemic occurs; the legal analysis of relevant laws significantly domestic legislation; the pertinent theories under legal and economic aspect. The paper is excluded from the state governance theories, also some other concepts that might go with cottage industrial revolution but do not comply with the perception of revival.

Limitations are thereof that the lack of interviews with the workers as due to this pandemic the physical communication has disoriented. The extent of the cottage industrial sector does not confine to a rooted territory, covering each aspect was difficult. This paper has incorporated the information-analysis within mid of November 2021.

IX. CONCEPTUAL AND ANALYTICAL FRAMEWORK

'Cottage industry' means an industry which is accompanied by the help of the members of a family either as a whole time or part time occupation and the sum investment do not exceed as much as in an industrial investment" (The Bangladesh Small and Cottage Industries Corporation Act, 1957) Cottage industry having a limited scaling of manufacture operations that is executed from a person's home, focusing on the mass production of labour-intensive goods with a consequential downside when competing with factory-industry based manufacturers. (Kenton, 2020).

a) *Jurisprudential View*

The pure theory of law by Hans Kelsen, right here it is mentioned that the law must be free from all classification of politics and other variables. The term 'Volksgeist' refers to a unique way that connects the biological heritage of the people, where the portion of this paper is associated at first hand. Custom, biological activities, environment are all the parts under 'Volksgeist' that employ the theme within historical school. The philosophical school of law, in this direction Salmond defines it as the merger of both moral and legal jurisprudence, any action should be bound by both legal and moral aspects even in case of economic sanctions balancing our cottage industrial sector. The doctrine of 'laissez faire' indicates the industrial and technological progress or revolution to visualize the relationship between law and the society promoting social welfare. (Mahajan, 1987).

b) *Economic Recovery Model Theories*

The father of economics Adam Smith, with his theory on economic development, specifying that the state must not implicit any restrictions and the division of labour and extension of market is desired, the theory refers to a certain positioning stationing the economic enlargement of all sectors is attributed there the cottage industrial development can enhance such development. The Keynesian Model, in the time of great depression (1929-1933) there put emphasis on its economic policy having modern developments in society and explaining achieving all-encompassing employment and economic reconstruction. In the current circumstances, our cottage industrial sector needs an economic recovery for one year of disruption in trade and business where this can be a helping hand.

The Neo-liberal Model considered the two concepts of 'laissez faire' and the Kenynesian model: though the invisible hands are needed, state intervention is required. Under The Sustainable Development Theory, after the Millennium Development Goals, the Sustainable Development goals approached within an aspect of development of certain stages, there the reduction of poverty and further actions are described, not beyond the ambitious sustainable development goals. Theories on SME Impact where the theory on change on business management and the finance theory of change work around the overall business-economic development.

The theory-based approach of every pertinent sector of knowledge embracing the issues of reviving the cottage industries in the post COVID-19 circumspect, suggesting keyways to be analysed and building the framework for this sector to amend the surroundings, bringing back the commercial benefit thereof.

c) *Analytical Framework*

The relevant theories were analysed in such a way that the historical school of law there Savigny indicated about the culture of the people, Volkgeist said about the heritage of the people connecting the cottage industries as that reflects the culture and heritage. Here the cottage industrial sector is absolutely a wedge to refer the culture with the legal system The Philosophical School of law, there Salmond and Kant opined as to social development that gives the essence of reviving the cottage industries as a part of social development. The laissez faire concept has a very immediate communication with cottage industries as it promotes the social welfare by bringing back to the culture and heritage with the economic establishments. The Economic Recovery Model theories can be helpful to analyse "Laissez faire" Model to market mechanism, the Kensiyan model applicable as in times of disaster, the government needs to take expansionary fiscal policy that can guide the revival factor directly. The sustainable development theory works towards economic prosperity and SME impact leads to the training and financial assistance which leads to a role in strengthening the cottage industrial factor in revival.

The information collectively the first-hand data and the secondary literature have been accumulative to specify the relevancies concerning cottage industrial factors due to COVID-19 situation.

The formation of international legislations, policies, and regulation in what manner they incorporate the factors behind the revival of the cottage industrial sector that put them into the position where it was. The adoption of international policies into the domestic regime accompanying the challenges the sector faced.

X. CHALLENGES FOCUSING ON THE PRESENT CONTEXT

There are numbers of businesses that fall within the cottage industrial sector, the ancient sector furnishing the employment probability for man and woman also contributing to the Sustainable Development Goals (SDGs). Creating a strong labour force, an equal way of wage earning for living through these village rooted industries. The post COVID-19 stage, and the challenges can be more unfavourable for them. Their revival can be a considerable question to acknowledge in the post pandemic spot, as the number of challenges is increasing compared to prior COVID-19 stage. During the pandemic, when the shops were closed, that time the small factories and local places locating these products were produced, they faced a loss. Hereafter they caused obstructions to pursue the profession. Due to resulting from a consequential economic crisis around the world, the urgency of such products lessened and as the export enterprises were closed for a prolonged period, the demand in other

countries have declined thus the reopening phase was not that favourable for this sector. The challenges at present they are facing:

- Lack of Production- These products are made as the initiatives of orders, but having an extensive absence, the numbers of orders have reduced significantly.
- Vulnerabilities of the Workers- large government plants and manufacturing units do not comply with this field, rather they rely on foreign products with excuses lacking in quality (*The Financial Express*, 2020) the absence made them more vulnerable.
- Not accustomed to Digitalization- With the primary data taken the workers are not aware of online business modules; even so few of them are associated with the new form of business. The sum is less in this respect.
- Effects on Export Zone- These products have a value in international trade. The pandemic causes a barrier in the way of exporting cottage industrial products. This may put the economy vulnerable due to not contributing to the export zone.
- Not aware of Legal Protection- The legal provisions saved for this sector are not well implemented and the workers are not as well.
- Recent Initiatives- There is the recent Government initiative to boost this sector by packages having Tk 2, 700 crores to uplift the cottage industry and SMEs, with the intention of providing social reliability projects for the elderly persons and widows in poverty-stricken areas. (Karim & Bin, 2021).

XI. A SCOPE FOR REVIVAL WITHIN LEGAL AND INSTITUTIONAL ARENA

The paper has indicated towards the challenges, leaving with a scope of reviving the sector. The analysis of legal protection along with the institutional assistance are to overcome the given challenges. This will precisely lead towards the factor of reviving the sector.

a) *A Legal Analysis*

The way of their sufferings in post COVID-19 spot have by and by deducted their economic development and social security, the monitoring on their revival need to be conveyed. After the discussion on the theories in different branches of knowledge and analysis of the current challenges of Bangladesh, the requirement of legal procedure is necessary. By means of legal arrangements, the revival can be feasible for their social and economic stability.

b) *Analysis on Domestic Legislations*

The Constitution of People's Republic of Bangladesh within the ambit of supreme law of the country mentioned about the development of rural

territory and cottage industrial sector, article 16 refers as follows-

“The State shall adopt effective measures to bring about a radical transformation in the rural areas through the promotion of an agricultural revolution, the provision of rural electrification, the development of cottage and other industries, and the improvement of education, communications and public health, in those areas, so as progressively to remove the disparity in the standards of living between the urban and the rural areas” (Constitution of People Republic of Bangladesh).

The Bangladesh: Small and Cottage Industries Corporation Act, 1957- This is considered to be the mother act concerning the cottage industrial issues; here provisions responded to the cottage industrial sector mentioned about the provisions where agreement with other financial institutions can be maintainable as to give loans to the cottage industrial sector includes Bangladesh Bank, Bangladesh Shilpa Bank, Bangladesh Shilpa Rin Sangstha, Bangladesh Krishi Bank, Rajshahi Krishi Unnayan Bank along with the about the funds, loans and schemes. (Bangladesh Small and Cottage Industries Corporation Act,).

Industrial Policy, 2005: It has mentioned of the cottage industrial sector, where the foundation of SME and the other cottage industries in contemplation of manifesting a proper balance in the field of trade, describes about the women entrepreneurship concerning the policy, here the women's participation in cottage industrial work is likely to be seen more and in consequence the support and cooperation is highly essential. Institutions named such as BSCIC, Bangladesh Industrial and Technical Assistance Centre (BITAC), Bangladesh Institute of Management (BIM), National Productivity organisation (NPO), and Small and Cottage Industries Training Institute (SCITI) shall be in assistance in this regard. It incorporated the foreign investment with the export linkage of SME products, technological and institutional assistance, and training facilities. (Industrial Policy, 2005).

Bangladesh Handloom Board Act, 2013: It has stated about a board with providing information about the weavers, their numbers, providing raw materials, funding, loans with limited interest, assistance as to exporting, training procedure, assisting the co-operative weaver society, over all making this sector more popular in terms of their work. (Bangladesh Handloom Board Act, 2013).

Bangladesh Academy of Rural Development Act, 2017: The academy looks forward to research, development, advisory opinions, national international seminars, and many additional functions. The funds thereby provided here to enhance rural development come from Government's internal funding, funds from international NGOs, governments, profits from investments, funds

from scheduled banks. (Bangladesh Academy of Rural Development Act, 2017).

Bangladesh Rural Development Board Act, 2018: This Act aims at improving the rural condition through employment opportunities, production, formation of co-operative society in districts, upazilla, village centric, educational, and vocational training, funding and loans coming from infrastructural earnings, profits, money from investment, funds from national-international organisations.

SME Policy 2019: Here the strategic goals describes as number 2 that to access the finance for the SME sector, goal 3 for capacity building- sustainability, goal 4 of start-up/new business, goal 7 to train up the SME entrepreneurs, goal 8 to evolve women entrepreneurship goal 9 to create an effective linkage to large industry with SME products for its demand, goal 10 establishing environment friendly SME industries where the cottage industrial can play a vital position, goal 11 SME related research activities and SME development. Alongside necessary assistance, infrastructures, favourable environment and elevation of loans, credit risk reduction and credit transaction through Bangladesh Bank with further commercial banks and SMEF and research work in this sector. (SME Policy 2019).

c) *International Law Perspective*

The cottage industries are somehow associated with socio-economic and cultural expansion, there the certain rights laid aside for this sector under international mechanisms should be more observed. The explanation of the international instrument can assuredly ascribe to a way to maintain the international standard.

Universal Declaration of Human Rights, 1948- Everyone has that social security and the resources towards amplifying their social, cultural, and economic rights for development where the given subject on cottage industries has such relevancy, cultural life of the people, that to enjoy and carry forward their tradition. There the cottage industries are a medium. (Universal Declaration of Human Rights, 1948).

International Covenant on Economic, Social and Cultural Rights, 1966- Promoting the social economic welfare, the concept of cottage industrial factor can be included there, social welfare and social insurance assurance. These provisions may work enveloping the pertinence of cottage industrial sector. (International Covenant on Economic, Social and Cultural Rights, 1966).

Convention on the Elimination of All Forms of Discrimination against Women, 1979- It has mentioned about political, economic social and cultural development for enjoyment of their human rights prospect, employment opportunities of women for economic development.

(Convention on the Elimination of All Forms of Discrimination against Women, 1979).

International Labour Organization (ILO)- It has that impact on each working era to ensure the environment and other aspects compiling all sectors of industries, sectors, works and their relevant rights perspective. In the Social Policy (Basic Aims and Standards) Convention, 1962 there the establishment of suitable industries in rural areas with adequate workforce is mentioned with the non-discrimination clause.

Therefore, it is required to constitute a policy for the post pandemic revival of the cottage industries to enhance our national economy and revitalise our cultures by means of this sector.

d) *Institutional Assistances*

This sector depends on the limited ranges of finance taken by family savings or relatives, later when their business shapes, they use to take loans from banks and Governmental financial institutions thus it requires assistance more from the institutions for the ongoing post pandemic phase.

Last year in between March to May several assistants were provided, 200 billion soft loans were disposed of by the Government. BSCIC provided 131.14 crore money to this sector. Monetary assistance given by the Ministry of Industries, there 600 crores have been allocated for the cottage industries (UNB News, 2020). In 2021 started with a new allocation of 2700 crore money for this sector, the total sum is tk124,053 crore that have been specified, the Social Development Foundation, Palli Daridra Bimochon Foundation, and Bangladesh Palli Development will be providing more 300 crores in this regard. (Karim & Bin, 2021) Necessary schemes, recommendations are given priority boosting and promoting this sector. BSCIC loans, Bangabandhu Youth Loans and the loans from Karmasangthan Bank all have accumulated towards the revival of this sector in Comilla (Rahman, 2021) Some additional steps are required to build up the sector with the intention of revival to ensure their socio-economic rights and expansion.

XII. WAYS TOWARDS REVIVAL

The term 'Revival' refers to the prospect of being brought back to a position where it was placed well. The term can indicate the extent to the state of placing it in the primary stand, or even better. The legal mechanisms are the ways by which any undertakings can be implemented, as it has such binding obligations. The state intervention, legal adequacy, backlogs are the pertinent factors that can lead towards the revival of this sector. The legal means can be a way out of studying and recommending why the revival is needed and how far it can be feasible.

All the existing legislations in Bangladesh stated about the cottage industrial factors however there is question about the adequacy in case of forming the concept of 'revival.' These Acts are adequate for their

own purpose, but consequences like COVID-19 pandemic the inclusion of certain clauses to boost up the sector that is under vulnerable situations needs to be addressed to.

Bangladesh has been a member of several human rights instruments that have been mentioned in earlier, though the mentioning of 'revival' is missing yet the survival of these rights is considered, by which the interpretation of revival can come across. The International Labour Organization (ILO) in Bangladesh is backing the small enterprises and their development activities. Being an international organisation, it has several enrollments towards the working sector that can eventually lead us to the concept of revival within a binding effect. The International funding for Bangladesh in the time of pandemic has some utility, International Monetary Fund (IMF) stands for IMF resources, in the form of loans under the Rapid Credit Facility (RCF) and Rapid Financing Instrument (RFI), to assist the government of Bangladesh in case of its economic disruption. (IMF News, 2020).

About the assistance from BSCIC of allotting financial help to the sector since 2020 and this year another new funding has reached 2700 crore. Another crucial factor is that the BSCIC is going to establish a SME bank for boosting this sector that can create a comfort in case of high interests. (Hossain, 2021).

Other countries like the Canadian Government have allocated 237 million for rural businesses and SMEs in pandemic along with partially forgivable loans up to CAD 40000. In India, their Reserve Bank of India placed Long Term Repo Operations (LTRO) for assisting this sector by giving loans (Swain, 2020).

Therefore, including an emergency funding provision for pandemic issues should be incorporated. In the Ebola outbreak in 2014 in West Africa, the International Growth Centre (IGC) played a vital role in funding the affected area, recommending national and international policies to prevent such a situation in near future. The Economic of Ebola Initiative assisted to recover the slow down economy of West Africa. (IGC, 2015). We are not conversant in whether the same policies might work in Bangladesh to revive the sector, but we do have the possibilities to allow such inclusion for betterment.

XIII. FINDINGS OF THE STUDY

The study revolves around the challenges, vulnerabilities of this sector that is caused by the COVID-19 pandemic in Bangladesh. At present the post pandemic phase requires certain changes and modifications to revive our cottage industrial sector in Bangladesh. The relevant legal analysis of domestic and international regimes with institutional assistance tends towards a hope of reviving the sector. The existing challenges that have been discussed earlier can be

eradicated if the steps towards revival are followed accordingly. The analysis of the secondary and primary data gives us the specific information that:

Challenges in the aftermath of COVID-19 pandemic phase- The closure of shops, some of the businesses under the cottage industries are suffering as the hand-stitched products from Jessore, Rajshahi, Jamalpur; the Bamboo and Jute made Products due to the closure of establishments for about a long time, the productivity has reduced. Above all some of the businesses sustained well as the handloom industries in Sirajganj are continuing their business; also, Jamdani and Muslin have not reduced its vast recognition worldwide. These products are made and traded a little way better.

The other challenges were the involvement in the other sectors, due to not having the proper way of earning the workers have shifted to some other professions. Their participation in the export zone has been lessened. Though some initiatives are taken, that cannot cover this large sector. The number of productivity has decreased, and the vulnerabilities of the workers are beyond expectation. The institutional assistance was not adequate to cover them all, also due to not experiencing such a pandemic phase the other facilities are not enrolled that way. They are not that way aware of the legal assistance.

Feasibility of Revival through legal and institutional aspect- It cannot be accurately said that to what extent the revival can be feasible. The domestic laws have provisions for funding, agreement and there was no such mention of emergency funding for pandemic states. On the other hand, the international mechanisms have emphasised the periphery of economic, social, and cultural rights where the cottage industries have continuous linkage. The international instruments should have that binding effect on the state parties to fulfil these rights. There is a suitable number of institutional assistance from BSCIC and banks but the number of schemes and funds by the Government should have been reached proportionately to this sector as the number is large.

XIV. RECOMMENDATIONS

The relevant literatures, first-hand data have in general accumulated towards a scenario where the revival calls for to take place with following some of the recommendations that has evolved thereby-

- The challenges they are facing there, a process of digitization should be adopted in every sphere of their businesses. Digitalization in the cottage industrial sector, their market promotion toolkits, green economic development, and sustainable business policy are prerequisites here.
- The existing legal regime should incorporate a provision for funding the cottage industrial sector in

case of emergency site or pandemic period to carry out their undertakings horizontally. The national or international regime can generate a binding atmosphere to work towards their revival, which can be regarded as a persuaded extent in the post pandemic era. The institutional assistance is significant, but those should reach proportionately to the affected areas.

Revival in pandemic, or revival in COVID-19 has the same phasing, there measures should be prepared earlier so that the cottage industries does not need anything to revive them, rather to expand their sector.

XV. CONCLUSION

The cottage industries contribute to the economy dividing their products to promote our customary knowledge and artistic esteem. Due to COVID-19 crisis this sector has been disrupted badly; lack of production, lack of sale, lack of proper funding these are the major challenges they faced, where measures should be executed for the post pandemic for their revival. This sector is the worst sufferer as they belong to the community of small scaling industry. The findings of the study accord an understandable interpretation that how far the challenges with the cottage industrial sector are justified in Bangladesh, their vulnerabilities, assistance, and the availability of legal assurances in the post pandemic along with a scope of reviving this sector within the framework of legal and institutional aspect. The recommendations are given to denote the orthodox legal-institutional remedy for revival of this sector evolving their social, cultural, and economic development in the post COVID-19 pandemic. The output provides a complete direction that this sector needs actions for its revival, not only for its own sake but also restoring the glory of this sector that put an effort to bear our tradition for about a prolonged period.

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Mitigating Cyber-Attacks and Threats in South African Commercial Banks

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Abstract- The increasing incidence of cybercrimes has become a pressing issue for society, businesses, and governments. Responding to the growing demand for digitisation from customers and investors, South African institutions have become targets of sophisticated cyberattacks. The financial sector, considered part of the country's critical infrastructure, has not been immune. The frequency of attacks on commercial banks in South Africa has risen, with several successful cyberattacks causing substantial harm. This paper explores the interventions commercial banks use in South Africa through a qualitative research lens. The results indicate that while technical interventions provide value, there are still opportunities for improvement in the human and process elements of the interventions. This highlights the need for a holistic approach to cybersecurity, incorporating technology, people, and processes to mitigate the risks posed by cyber threats effectively.

Keywords: *cyber threats, cyber-attacks, commercial banking, cybersecurity.*

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Mitigating Cyber-Attacks and Threats in South African Commercial Banks

Tlhologelo Mphahlele ^α & Joel Chigada ^{*}

I. INTRODUCTION

The rapid advancements in Information and Communication Technologies (ICTs), multiple industries and the globalisation of economies have seen an influx of technological innovations. The global financial services sector has undergone significant changes with the rise of Financial Technology (FinTech), including mobile Internet, cloud computing, Big Data, search engines and blockchain technology (Cheng, Li, Wu, & Luo, 2017). The introduction of digital services such as digital government, digital commerce, digital education, digital health, digital environment, and digital banking has enabled commercial banks to reach a wider audience without needing a physical location, albeit against a rising scourge of cybercrime (Chigada & Naailah, 2021). As cybercrimes continue to escalate in complexity and severity, financial institutions have become prime targets for criminals. These institutions offer more significant attack vectors due to the increased online services provided to their clients, making them vulnerable to cyberattacks (Chigada, 2023). However, the growth of online financial services has also led to increased information security and data breaches, which threaten economic interests, national security, and intellectual property (Tisdale, 2015).

The increasing frequency of cyber threats and attacks on financial institutions has led to the need for commercial banks to adopt interventions to mitigate these threats and attacks. These interventions range from technical solutions, such as firewalls, antivirus software and encryption, to people-oriented interventions, such as cyber awareness and training, and process-oriented interventions, such as incident response planning, risk management and security governance. While the technical interventions provide a degree of protection against cyber threats, the people and process-oriented interventions build a culture of security within the organisation and ensure that the technological interventions integrate into the bank's

overall approach to cybersecurity. Chigada (2020) avers that unacceptable human behaviour requires attention. Individuals operate in a space where they determine what, why, how, and when to act in a specific way. Nyasvisvo and Chigada (2023) state that firms may put in place cogent measures to curb cyber-attacks and data breaches, but nefarious and threat-actors are always a step-ahead in their acts. Therefore, it is best to implement continuous measures that include a culture of awareness, training and development and others that would deter would be-cybercrime.

A review of literature demonstrates the abundance of studies on cybercrime and information security challenges in financial institutions (Mabunda, 2019; Khan et al., 2020; World Health Organisation, 2020; Chigada & Madzinga, 2021). Most of these studies were conducted during the Corona Virus Disease-2019 (COVID-19) period. Post the COVID-19 period, there have been studies on cyber-attacks and threats on financial institutions, forced to pay ransomware, but there is a dearth of reports that suggested how financial institutions in South Africa have mitigated these cyber-attacks and threats. A preliminary investigation showed that financial institutions were not keen to share information security and cybersecurity issues given the sensitivity of clientele information managed by these institutions. We discovered that the South African Bank Risk Information Centre (SABRIC) collated most of the cyber-attacks and threats information for all banks in the country. Other financial institutions such as insurance companies, medical aid schemes etc reported their data breaches to specific sectors other than SABRIC. After engaging some participants, we discovered that institutions preferred to operate in silos for fear of exposing their strategies or company information. It is against this background that the present study examined interventions that are deployed by South African commercial banks to mitigate cyber-attacks and threats. The following research questions guided us to address the study objectives:

- What are the main cybercrime typologies are targeted at South African commercial banks?
- What are the effects of cybercrime typologies on the performance of commercial banks?
- What interventions can mitigate cyber-attacks and threats in South African commercial banks?

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II. LITERATURE REVIEW

a) *South African Banking Landscape*

The banking landscape in South Africa comprises a central bank (South African Reserve Bank), five large local banks and other smaller banks and financial institutions. The sector is considered well-developed and ranked relatively high compared to developed nations. In 2017, the South African banking sector ranked 11th out of 138 countries in market development in the global competitiveness report. It also ranked 2 out of 138 countries in terms of bank soundness; a sound banking system ensures the optimal allocation of capital resources and efficient management of risks to prevent costly banking system crises and their associated adverse feedback effects on the real economy (Schwab, 2017; Schwab, 2019). Simbanegavi, Greenberg, and Gwatidzo (2015) state that the South African banking sector is monopolistically competitive; however, this does not indicate a lack of efficiency or competitiveness within the market. Moyo (2018) further corroborates this by highlighting that the sector comprised 64 institutions as of 2017, which indicates competitiveness.

The five big banks have also started making significant changes to how they do business; in digital innovation, they have had to choose between becoming part of somebody else's ecosystem or becoming a destination. This has led to some of the banks embracing a platform banking approach, which allows banks to offer more than financial services to their customers. Commercial banks such as Nedbank, First National Bank, and Standard Bank have either started this offering or have expressed their intentions to become platform banks (Whateley, 2021; Brink, 2020; BusinessTech, 2021).

b) *Cybercrime Typologies in the South African Banking Industry*

Zhang, Yanping, Xiao, Ghaboosi, Zhang and Deng (2012) define cybercrimes as criminal activities that use modern information technology, such as computer technology, network technology, etc. The South African definition of cybercrimes further expounds on their definition to include cyber extortion, unlawful acquisition, possession, provision, receipt or use of a password, access codes or similar data or devices, attempting, conspiring, aiding, abetting, inducing, inciting, instigating, instructing, commanding, or procuring to commit an offence, theft of incorporeal, penalties, and competent verdicts (Department of Justice and Constitutional Development, 2016). Brar and Kumar (2018) note that cybercrime's motivations include entertainment, hacktivism, financial gain, and revenge. South Africa has also seen a scourge of cybercrimes; critical infrastructure within the country has not been spared, and in 2021 South Africa ranked 7th globally in

cybersecurity exposure and had one of the highest numbers of cybercrimes victims globally (Cyber Exposure Index, 2021)

c) *Hacking*

One of the cybercrime typologies to have gained popularity is hacking. According to Van Niekerk (2017), the first cybercrime incident against a commercial bank in South Africa occurred in 2003 when Absa Bank lost approximately ZAR500000 due to a hack. The threat actor, in this case, compromised the users by sending an email containing a trojan which obtained the banking details and PINs of the victims when opened. The hacker then used the victim's computers to access their bank accounts, bypassing security controls and making it seem like a legitimate session; they then proceeded to withdraw money from the victim's accounts (Mohan et al., 2020). Hackers can access systems through structured query language (SQL) injections, theft of file transfer protocol (FTP) passwords and cross-site scripting (Chigada, 2023).

d) *Internet Fraud*

In 2006 in three months, account user details for clients belonging to three commercial banks in South Africa were compromised; the compromised credentials were then used to transfer money from the victim's accounts into either cell phones or Telkom prepaid accounts (IOL Media, 2006). The threat actor, in this case, found a way to hack into either business accounts or personal accounts belonging to the victims using malicious tools such as spyware, backdoor trojans and keyloggers; this breach cost an estimated USD80000 (Oiaga, 2006).

e) *Unethical Employee Behaviour*

An attack possibly aided by employees at Landbank and Absa Bank occurred in December 2010; a syndicate hacked into the Landbank's infrastructure and obtained secret passwords that only a select group of personnel had access to. The syndicate then proceeded to set up automated fund transfers to multiple companies. However, the attackers were unsuccessful, as bankers at Absa noticed the suspicious transactions and froze the accounts (Potgieter, 2011). Absa South Africa was a victim of an insider attacker after an employee illegally accessed and shared customer information with third parties; the data accessed by the employee contained a mix of sensitive information and marketing information (Thompson & Farber, 2020). Within the same year, Nedbank suffered a data breach through one of its third-party service providers (Computer Facilities (Pty) Ltd). The compromise involved the leaking of personally identifiable information of some Nedbank clients. The third-party breach affected approximately 1.7 million clients, with 1.1 million active clients (Nedbank, 2020).

f) *ATM Fraud Attack*

Standard Bank South Africa suffered a massive cyber-attack in 2016, leading to the bank losing ZAR300 million through an ATM fraud attack in Japan. In the coordinated attack, about one hundred people used forged Standard Bank credit cards to withdraw money from 1400 ATMs throughout Japan (Moyo, 2016). It was suspected that hackers broke into the bank's digital infrastructure and obtained about 3000 sets of personal data that were subsequently used in the attack (News24Wire, 2016).

g) *Distributed Denial of Service Attack (DDoS)*

In 2019 South African banks were hit by a massive Distributed Denial of Service Attack (DDoS), which targeted multiple banks in with country. Distributed Denial-of Service attack (DDoS) is perpetrated when threat actors and attackers clog the bandwidth denying legitimate users from access computing services (Chigada, 2020). This attack disrupted online and mobile app banking (McKane, 2019). The attack was ransom-driven, with the threat actors sending ransom notes to employee email addresses and unattended email addresses within the targeted banks (Fin24, 2019).

h) *Phishing Emails*

Banking clientele have been receiving Phishing emails purporting to be coming from legitimate source. Nyasvisvo and Chigada (2023) define email phishing as fraudulent messages which are designed to appear genuine in order to convince the recipient to believe the messages and act upon it. Burns et al. (2019) suggest that the use of well-known logos, brands and layout make these emails look real and this is what deceives victims. Chuma and Ngoepe (2021) state that South Africa has recently become of the top countries experiencing Phishing attacks.

i) *Identity Theft And Bank Card Fraud*

Chigada (2020) reports that identity theft and bank card fraud have the highest commission rate in the world. The South African Bank Risk Information Centre [SABRIC], (2020) reports that identity and credit card theft cases are on the rise. Attackers use the internet (online services) to commit fraudulent solicitations, transactions and transmit these fraudulent transactions to financial institutions. Internet fraud has similar trait as cyberstalking (Khan et al., 2020).

j) *Complexity, Frequency and Severity of Cyberattacks*

Over time, the increasing complexity, frequency, and severity of cyberattacks targeting financial institutions bring forth the inevitability and the impossibility of completely protecting the integrity of critical computer systems and data (Dupont, 2019). The fourth industrial revolution also adds a level of complexity as it represents a fundamental change in the ways humans live and work; it is enabling the merger of

the physical, digital, and biological worlds, the combination of cyber-physical systems, the Internet of Things and the Internet of System, smart factories and fusing technologies in ways that create both promise and peril (Schwab, 2015; Marr, 2018).

k) *Insufficient Information Security Expertise and Awareness*

The European Union Agency for Cybersecurity (ENISA) (2021) identifies some of the challenges in cybersecurity as a lack of sufficient information security expertise and awareness, incomplete organisational policies, reluctance to fund security, lack of accountability, fragmentation of security technical standards, supply chain management complexity, interoperability of devices, platforms, and frameworks, and lack technical capabilities (Malatras, Skouloudi, & Koukounas, 2019). Blum (2020) adds to the list of challenges by identifying ineffective communication, hard-to-change culture, and the lack of solid leadership within organisations.

l) *Lack of Confidentiality, Integrity, and Availability*

An information security strategy should be employed to meet the requirements of the information security triad: confidentiality, integrity, and availability. Confidentiality is concerned with access controls around information and system permissions. Integrity is concerned with the authenticity of the information being viewed and accessed. Availability entails anyone authorised to access and modify data within an appropriate timeframe. When looking to secure information resources, organisations must balance the need for security with users' need to effectively access and use these resources (Bourgeios, Mortati, Wang, & Smith, 2019).

III. INTERVENTIONS TO MITIGATE CYBERCRIME AMONG COMMERCIAL BANKS

a) *Computer Security Incident Response Teams*

The Security Operations Centre (SOC) comprises a Computer Security Incident Response Teams (CSIRT), and other functions form an effective cybersecurity architecture within any institution. The Security Operations Centre and the CSIRT are responsible for dealing with cybersecurity incidents within institutions; they do this by investigating, triaging, responding and remediating incidents (CompTIA, 2021; Cybersecurity & Infrastructure Security Agency, 2007). It has become imperative for firms to establish in-house cybersecurity management teams. In so doing, the teams should develop and implement a governance, risk and compliance framework (Chigada, 2023).

b) *National Cybersecurity Policy Framework*

Only recently, through the National Cybersecurity Policy Framework, Cybercrimes Bill, and Protection of Personal Information Act, firm cyber-

security policies were adopted in South Africa. The purpose of the National Cybersecurity Policy Framework was to create a secure, dependable, reliable, and trustworthy cyber environment that facilitated the protection of critical information infrastructure whilst strengthening shared human values and understanding of cybersecurity in support of national security imperatives and the economy (Republic of South Africa, 2015). The policy framework sets out to achieve this through centralising the coordination of cybersecurity activities and establishing relevant structures, policy frameworks and strategies in support of cybersecurity.

c) *The Protection of Personal Information Act (POPIA)*

The Protection of Personal Information Act (POPIA) had the objective of promoting the protection of personal information processed by public and private bodies; introducing certain conditions to establish minimum requirements for the processing of personal information; providing the establishment of an Information Regulator to exercise certain powers and to perform specific duties and functions in terms of the Act and the promotion of access to Information Act, 2000; regulating the flow of personal information across the borders of the Republic of South Africa as well as to provide for matters connected therewith (Republic of South Africa, 2013).

d) *Adoption and use of Biometric Authentication*

Chang and Coppel (2020) state that a good intervention strategy to mitigate credit card fraud is the adoption and use of biometric authentication. Customers do not need to carry credit cards or key-in personal identification numbers (PIN) when transacting. Merchants would have invested in biometric technologies that support biometrics authentication. Different biometrics usable in the authentication process are classified as physiological (fingerprint, face recognition, IRIS scan, hand geometry, deoxyribonucleic acid [DNA]) and behavioural (voice pitch, speaking style, typing rhythm, signature, breathe) (Pillay, 2020).

e) *Cybersecurity Risk Assessments*

Chigada (2023) states that firms should periodic cybersecurity risk assessments to identify security weaknesses and likely risks posed by third-party vendors (Galine et al., 2017). The cybersecurity risk assessment drive helps the firm to keep a detailed register of its assets which are authorised to access the corporate network. There is a proliferation of Bring Your Own Device (BYOD) approach where some organisations allow employees to use their personal devices for work purposes (Chigada & Daniels, 2021).

IV. METHODOLOGY

a) *Research Design*

The study employed a qualitative research design which enabled it to explore the social and human

aspects of cybersecurity through a conversational approach provided by a qualitative research design. Creswell and Poth (2018) define qualitative research as a research activity that locates the researcher worldwide. It consists of interpretive, material practices that make the world visible. The authors expound on the definition by stating that qualitative research begins with assumptions and a theoretical framework that informs the study to address the meaning individuals or groups ascribe to a social or human problem.

Cleland (2017) postulates that qualitative research methods address the "how" and "why" of research questions and facilitate a deeper understanding of experiences, phenomena and context. It further makes it possible for the researcher to ask questions that cannot easily be put into numbers. Our focus was on how reality could be observed and our relationship with that reality (epistemology). By choosing the qualitative research methodology, the intention was to complement the subjective ontological stance and interpretivist philosophical paradigm (Nyasvisvo & Chigada, 2023). In order to address the research problem through direct interaction and personal conversations with participants, the ideal methodological choice was the qualitative one. We probed participants for clarity on issues that were not clear (Creswell & Creswell, 2018).

For this study, qualitative data collection was done through semi-structured interviews with employees from commercial banks in South Africa. No-probability purposive sampling was used in this study in the selection of participants from the respective IT departments. We used an inclusion/exclusion approach to select participants for the study. The prerequisite for employees to participate was to be employed in IT, Risk, Compliance, IT Security, or governance within the banks. The interviews were conducted using video conferencing software (Microsoft Teams and Zoom).

b) *Data Analysis*

As espoused by Kabir (2016) analysing data helps to summarise the findings but in a meaningful way so informed decisions can be made. We were actively involved and participated in the semi-structured interviews, therefore, we understood, described and interpreted the views from the participants' perceptions of events as they occurred in a natural setting. Within qualitative data, we used thematic data analysis (TDA) to identify, analyse and interpret themes which were invaluable to address the research questions (Maguire & Delahunt, 2017). Thematic analysis is a method used to identify and interpret meaning patterns across qualitative data (Clarke & Braun, 2014). Qualitative data analysis is simultaneously an iterative and sequential process that follows a set number of steps to assign meaning to pieces of data (Rossman & Rallis, 2017). This study employed thematic analysis to identify key

impediments to the challenges faced by commercial banks in South Africa regarding developing local cybersecurity frameworks. The use of ATLAS. Ti helped us to tease out emerging themes from the transcriptions. We deployed a six -step approach in analysing data and these were familiarisation; generation of initial codes; generating themes; reviewing themes; naming themes and write-up of this report. To ensure accuracy and error-free and easy to read responses, we used the Dragon speech transcription software. Findings were presented in text format.

V. FINDINGS AND DISCUSSION

The data collected for the study was gathered from twenty-one participants, fourteen male participants and seven female participants. The disparity between the number of male and female participants is partly because males dominate the Information Communication Technology (ICT) sector within South Africa. This is supported by Padayachee and Pillay (2018) who state that females are under-represented within the IT sector in South Africa and further evidenced by Malinga (2021) who points out that out of the 236 000 ICT roles within South Africa, females only hold 23% of those roles. Due to this factor, the study has more males than females predominantly.

a) *Cybersecurity Challenges Faced by Banks from Internal and External Perspectives*

This question explored the challenges commercial banks face regarding cybersecurity, revealing one central theme raised by most participants. The main theme was the lack of IT and Cybersecurity skills. Participant MN14 stated that: "I don't think that we have an all-round. I don't think I don't think the industry has an all-around pool of skilled people that can effectively, you know, defend, to a certain extent, yeah." This was supported by participant HN07 who indicated that:

"I think one of the challenges as well is kind of skills, because when it comes to IT security, I don't have the skills and the knowledge"

Given the above perceptions, Participant MR11 added the following comments:

"They will always face threats internally and externally for exploitation and resourcing. I think resourcing. It's a question of the right skills or the right level of skills to be able to protect the bank."

Participants explained how lacking such a fundamental skill is detrimental to an organisation's security posture. Kshetri (2019) mentioned the lack of cybersecurity skills and estimated that by 2020 there would be a shortfall of about 100000 cybersecurity personnel in Africa. The World Economic Forum (2022) and (ISC)2 (2021) stated that there is still a workforce gap of more than 2.72 million positions globally, and the

cybersecurity workforce needs to grow by 65% to defend the critical assets of organisations effectively.

Participants also noted a lack of resources as one of the driving forces behind the challenges faced by commercial banks. Participant TM02 indicated that:

"I think the budget would be one of the biggest challenges. And why I'm saying this is remembered, most of because the organisation is the bank itself. So, for them to properly ensure that the bank is protected, and such, so the question is, do they have enough budget?"

In support of Participant TM02's views, MR11 stated that "And under-resourcing leads to a plethora of issues in terms of they can't deal with the vulnerabilities in a timely manner. They can't keep up with technologies; they can't keep up with security training". While BN06 asserted that "And the other challenge or the underlying challenge was lack of resources. So, you have fewer analysts or engineers, looking at a SOC."

European Union Agency for Cybersecurity (2021) supports the participant's views by positing that a lack of information security awareness and expertise in organisations often leads to a lack of cybersecurity budget and inadequate staffing. Da Veiga, Astakhova, Botha, & Hersleman (2020) stated that resources are required for successful implementations or changes to information security, with organisations with budgeting and funding being crucial to implementing security practices within organisations.

Commercial banks' cybersecurity challenges are industry-wide and not specific to one commercial bank. The first response was obtained from Participant AA19 who stated that:

"The second part of it, which is a lot around education and awareness and training for your staff, your staff need to be aware of the type of emails, they need to look out for the type of phishing emails that are being sent. It's very well crafted these days."

Participant JP16 further pointed out that in support of Participant AA19:

"Yes, we put controls in place to ensure they cannot remove that sensitive data information. But they are our first line of defence. I think of the word now that the attackers use a syndicate, Syndicate, and that's always going to be the main thing."

Participant KS12 averred and indicated that "The biggest vulnerability, according to me, right? It's people. Yeah, it's people. And, and by people, I mean end-users, because those are where most of the breaches stemmed from, you know, your phishing and all that."

Some of the major cyber incidents that have occurred recently were partly due to incompetent, negligent or users who did not know better. This was evidenced by Van Niekerk (2017) who stated that one of

the first successful cybercrime incidents against a commercial bank was a threat actor compromising a user's account by sending malicious mail to the user. Mitnick, Simon, & Wozniak (2002) ultimately state that employees and end-users are the greatest threat to corporate information security, intentionally or through negligence or often due to lack of knowledge.

Participants identified the deprioritisation of cybersecurity as one of the contributors to the challenges commercial banks face regarding cybersecurity. Participant JB15 stated that: "The first issue is that executive is primarily focused on generating revenue, as opposed to implementing security controls". This was echoed by Participant SD17 who had this to say:

"I think it's because I'm in, I've been put in a position where it's not emphasised, cybersecurity. And when you're given a title, you stick to the title and like expectations, and our theory to sort of know or understand it and things."

Participant NM21 asserted that "I mean, a long time ago, not maybe not a long time ago, not a long time ago. But if I were to wrap it up, I'd say it before, it wasn't something that banks traditionally focused on".

Security prioritisations help organisations identify the potential risks affecting them and subsequently prioritise the defence of their digital assets (Blum, 2020). Although the participants might occupy high positions of influence, security was still not emphasised in their role, implying that their subordinates also did not see the importance of safety. Keman and Pearson(2019) state that an organisation's lack of a strong cybersecurity culture can make them less resilient against cyberattacks.

b) *Misalignment of Security and Business*

The response from Participant JB15 was that "If you have too many security controls in place, you're slowing down business and stopping business from happening."

Participant KS12 provided a detailed response by stating that:

"But remember, security is actually a deterrent to business. To a certain extent. That's why you can't. We can just put encryption on everything because it then degrades the performance of applications and stuff."

A different perspective was shared by Participant JP16 who indicated that "You know, and this is the big kind of the elephant in the room with security is that security is always seen to business and project drivers as a blocker."

Blum (2020) states that misalignment of security and business could negatively affect any project's security touch. Edwards (2020) notes that a disconnect exists between how businesses understand and manage cyber risk, driven by organisations failing to

view cybersecurity as a business strategy rather than an IT problem. To overcome this misalignment Boehm, Curcio, Merrath, Shenton, and Stähle(2019)assert that organisations need to move towards a risk-based approach to cybersecurity.

c) *Cybersecurity Frameworks within your Bank*

From the question asked, one central theme emerged of the framework employees were most familiar with in their organisation. Three other subthemes emerged from the interview with the participants.

Theme 1: NIST Cybersecurity Framework

Multiple participants mentioned the NIST Cybersecurity framework as one of the frameworks used within their organisations. Participant MR11 was succinct with the response by stating that "So, the NIST I know we are we just at the company that I'm working, for now, we just did NIST, NIST review." An equally precise response from Participant AM09 stated that "Okay. All right. So, what I know is okay, this is the NIST framework." Whereas Participant JB15 weighed in by outlining that "So, for most of everything I've based everything on NIST compliance. Okay. The reason I've chosen NIST is that the American government takes federal law very, very seriously"

The National Institute of Standards and Technology's cybersecurity framework is a set of cybersecurity activities that are common across the critical infrastructure sector (Alexander & Panguluri, 2017). With estimates stating that almost 50% of all enterprises use NIST, the framework being the most mentioned by participants shows the popularity and widespread adoption of the framework (Banga, 2020).

Theme 2: ISO Frameworks: Participants also cited the International Organization for Standardization (ISO) standards as frameworks they were aware of within their organisations. Short and precise responses were received from three participants. For instance, Participant NT03 said that "Like sort of standard, like, for example, the one that I'm aware of. It's ISO 2700 something". Participant KM05 had this view that supported Participant KM03, "The ISO 27001 That is the only internationally accepted framework. So, meaning that it's an ISO standard, it's accepted everywhere is used everywhere, and that is the accepted norm." While Participant AM09 indicated that "Then your ISO to 27001 And 27002, and then. Yeah, but then now also, with the cloud. This standard is an ISO standard for security in the cloud."

The ISO 27001/ISO 27002 these frameworks/ standards describe an Information Security Management System (ISMS) and detail the steps involved in the establishment of such a system, with the ISMS aims to minimise risk and ensure business continuity by limiting the impact of security breaches through creating policies and procedures to manage a business's sensitive information.

Theme 3: Do not know: A subtheme from the interview with the participants was that few were unaware of the frameworks utilised within their organisations. Participants gave reasons ranging from cybersecurity not being in the direct scope of the roles to the organisations they are employed within not emphasising cybersecurity enough in day-to-day operations. Participant SD17 outlined that “I’m not really familiar with. I think it’s because I’m in, I’ve been put in a position where it’s, it’s not emphasised”. This was also supported by Participant DM01 who said that “I actually don’t know. It’s not in my scope. And then I’ve not really seen or heard anything shared along if the exact frameworks or tools that are being used within the bank.” There was concurrence from Participant AB10 who also did not know and stated that “Zero, sorry. I guess more I don’t know if I should call front-end or client-facing software; those layers might integrate more directly into our cybersecurity framework. But we are the absolute back end.”

d) *Interventions to Mitigate the Threats Faced by the Banks*

Various interventions that informed the themes of the question emerged during the study; these included implementing controls within the banks, building a more robust culture and awareness around cybersecurity, and continuously monitoring and maintaining the organisation’s security posture. The themes identified during the analysis of the captured responses are below.

Theme 1: Security Controls: Many of the participants indicated that having controls in place is one of the most effective ways to mitigate the threats and attacks faced by the bank. These controls comprise the three common cyber control types: physical controls, technical controls, and administrative controls (Chapple, Tittel, & Stewart, 2021).

“So we had initiatives around secure perimeter and network. And then so obviously, making sure that we don’t have any high-risk vulnerabilities that externally facing, conducting pen test remediating vulnerabilities during the configuration. These views were shared by Participant MR11.”

These views by Participant JP16 differed from what was stated by Participant MR11 above in that:

“But, you know, as I said, we have controls in place to ensure that we monitor data flow, and we understand what’s happening in the environment.”

Participant AA19 bridged the gap between what was said by Participants MR11 and JP16 by stating that

“You look at the type of access governance that you also have in place, which means only certain individuals are allowed to have access to certain data at any given time.”

IBM Cloud Education (2019) describes security controls as “parameters implemented to protect various forms of data and infrastructure important to an organisation. Although participants stated that having controls in place is one best ways of mitigating the threats the organisation faces, inadequate controls or control failures are usually the reason behind successful breaches. To adequately put in controls to defend against attackers, organisations need to undertake a risk analysis to determine the necessary controls to be implemented.

Theme 2: Security Tools and Assessments: The various initiatives that institutions need to ensure that they are secure to some extent and that they continuously monitor their security posture include the responses. What was considered secure yesterday would not necessarily be considered secure today. Participant MN14 stated that:

“You know, interventions are definitely buying the latest and greatest technology, the bank, the banking institutions, or the sector, if you may, they, they hardly spare any expenses when it comes to tools.”

While Participant AA19 was succinct in their answer by stating that “We do a lot of simulation, penetration testing, continuous routine testing.”

Comprehensive posture of security tools and assessments was obtained from Participant JB15

“We use IPS, IPS and IDS technologies to do like virtual patching. They using vulnerability scanners to pick up vulnerabilities that exist in the networks and in the infrastructure.”

From the responses above, it was clear that the organisations use vast and varying tools from different vendors to protect them. Comments from participant MN show that the organisations spare no expense when securing the best tools out there. These tools may be a collection of technical processes and practices designed to protect the institution (Möller, 2020; Sheikh, 2020).

Theme 3: Awareness and Training: It was evident from the participants that security awareness and training programs are crucial in educating end-users and employees in organisations to be better aware of security threats and respond appropriately. In view of training and awareness Participant AA19 stated that

“There so that it’s really important awareness education with the customers as well, ensuring that they know that, you know, ever, if there’s any communication that comes from a bank, that they verify that they trust in the source that it actually comes from.”

Participant VS18 summarised one’s response by stating that “We constantly have to do what is this cybersecurity trainings to just make sure that we are aware of, you know, is out there.” However, a mode

detailed response was obtained from Participant KM05 who indicated that:

“The people aspect, I would say the interventions have also been implemented there to ensure that you put people in those processes, that that that they understand their recommendations, that they understand they are role in protecting themselves and their organisations.”

Awareness programmes further assist in disseminating an organisation’s security policy to its employees with the hope that these programmes will encourage a security-aware culture so that good security practices will become the de facto approach to everything in an organisation (Gundu, Flowerday, & Renaud, 2019)

Theme 4: Risk Assessments: These assessments were critical drivers to understanding the overall risk the organisations were exposed to and tools for calculating and understanding the risk they would be exposed to when integrating with third-party service providers.

Participant BN06’s views regarding risk assessments were that:

“So, when I can think of taking that high-level risk assessment, being able to understand the risk faced by the bank, and through the process of risk assessment, you then need to make sure you have the right controls or tools, which mitigates those specific risk, and ultimately, threats as well.”

Risk assessment in terms of contracts was a major issue with Participant KM05 who indicated that “For every third party that we contract, we need to make sure that we do risk assessment, including a cybersecurity risk assessment”. A different posture was obtained from Participant MR11 who stated that “Also risk management effective proactive for thinking looking risk management. I think banks have done a pretty good job in terms of trying to resource the risk management department”

Participant JP16 had this to say regarding risk assessments:

“Like I say, you’re always going to have attacks and breaches, but this is exactly why we, we build in our risk appetite into these projects and how we implement controls, and we understand what is material to the bank.”

Blum (2020) posits that risk management can be a keystone within an organisation’s security culture and governance model. Wang, Ding, Sui, and Gu (2021) also support the participants’ views by stating that risk assessments are essential to effectively responding to cyberattacks. Their paper demonstrates how risk assessments assist in quantifying and identifying cybersecurity risks and finding attack paths with high cybersecurity threats.

e) *Impact of Cyber-Attacks and Threats on the Operations of the Bank*

The themes below served to answer the question above about the impact cyber-attacks and threats have on commercial banks. They also sought to meet the research objective of assessing cyberattacks and threats’ impact on commercial banks. Four themes were identified from the interviews, and the themes were:

Theme 1: Stop Operations: One of the other subthemes from the participants was the impact cyberattacks had on the CIA triad mentioned earlier in this study. Multiple participants noted how attacks could impact either of the triad’s pillars, leading to a halt in operations. Participant MR11 stated that “I think from an attack perspective if an attack is successful, the bank cannot operate at all. So, transactions cannot take place. People cannot transact, which leads to a financial impact on the bank.”

While more detailed responses were obtained from Participants JB15 and A119 respectively:

“They, I mean, it can really shut down the bank. You know, if the threat of the attack is big enough, yeah, you know, if you, if you’re a small bank, and you get a distributed denial of service, and you’re very centralised, the entire bank could be offline you cannot operate”(Participant JB15).

“We know ransomware is a massive issue. As you can imagine, you get different types of ransomware, you get ransomware, that encrypts files, and you get ransomware. That encrypts hard drives and systems” (Participant AA19).

Theme 2: Reputational Damage: This was summarised by Participant AA19 who stated that “And then obviously, the big elephant in the room is the reputational damage that comes from that because As you know, if your customer doesn’t trust you anymore, your customer is 95% of the time going to go somewhere else.”

Participant NM21 argued in that data breaches caused reputational damage to the brand by stating that:

“Reputational damage reputation itself obviously is terrible, this type of attacks and the times will go out to the media.”

The above extract was supported by Participant TM02 who stated that:

“So the implications could be catastrophic for the bank, you know, in a nutshell. And with that said, I think the manner in which the bank would respond to such attacks.”

Reputational damage and trade name devaluation are real consequences of cyberattacks. Trust between clients and investors is usually eroded when organisations are victims of cyber incidents. Hollard (2017), which is an insurance provider in South

Africa, states how a cyber incident that occurred at Standard Bank South Africa, which cost the bank around ZAR 300 million, had an impact on the organisation's reputation, not only because of the attack but the downtime associated with these attacks. Agrafiotis, Nurse, Goldsmith, Creese, and Upton (2018) identify reputational harm as one of the cyber-harms that results from cyberattacks; they state that reputational harm adversely affects how the public perceives the organisation, and this might, in turn, an effect on how the media portrays the organisation and the relationship between the organisation and its stakeholders.

Theme 3: Financial Losses: It was also evident that participants knew that financial losses faced by commercial banks when dealing with cyber-attacks were not only from the cybercriminals carrying out the attack but from the regulators who could impose fines on the banks for those material breaches. Participant KS12 indicated that "I mean, quoting the words of our CEO, cyber threats, have the potential to bankrupt the bank. And probably even make us shut down in a very short space of time."

While Participant OO04 directly pointed that financial losses were highly likely to occur by stating "There is a potential for financial losses, there is a potential for regulatory losses in terms of fines from the regulatory body when there is if it is determined that sufficient controls were not put in place to prevent the incident from happening"

A different perspective was shared by Participant VS18 who spoke about investors pulling out of the hacked bank:

"If the bank were to be hacked, shame, god forbid, and your traders don't have access to the market, the bank would lose millions because then you won't be able to bid in the market like wouldn't be able to participate."

The participants' views are corroborated by an Accenture report (2019), which showed that the annual costs of all types of cyber-attacks are increasing, with the average cost of an attack totalling US\$13.0 million in 2018. Within South Africa, the fines are imposed by the South African reserve bank and the Information Regulator depending on the type of infringement. Examples of these fines include a ZAR 1 million to Habib Overseas Bank Limited for inadequate internal controls for detecting suspicious and unusual transactions; Investec Bank Limited was fined R20 million for a similar transgression as Habib Overseas Bank (South African Reserve Bank, 2020). Recent examples of such fines include a possible penalty to the credit bureau TransUnion for a cyber breach that affected data belonging to South African citizens. The credit bureau was facing a potential fine of ZAR 10 million for the breach (My Broadband, 2022).

Theme 4: Loss of Investor and Customer Confidence: The last subtheme that emerged from the participants was how suffering cyberattacks could result in the financial institution losing investors and how customers' confidence in the institution might suffer.

Their views are supported by an expanse of literature that cites that the announcement of cybercrime often negatively impacts the market value of the stock prices (Smith, Jones, Johnson, & Smith, 2019). EY Global (2019) asserts the participants' views by stating that a cyberattack can destroy trust between organisations and their customers. This is because, in recent times, customers have been providing more data to organisations. Concurrently, concerns around data privacy and cybersecurity have been growing among customers.

Participant VS18 Stated that:

"And shareholders would not have faith, you know, in the bank itself. Because if you're unable to protect your systems against cyber-attacks, then they cannot trust that the interests are protected in the bank, and they feel very vulnerable. So you can do a lot in terms of the share price."

Participant DM01 was clear how the loss of information could be consequential to the bank by stating that "You could lose, number one, some very important information of your clients, which in turn will result in a loss of trust with the clients in the bank. And, you know, you could lose market share"

VI. CONCLUSION

This paper examined the mitigations available to commercial banks in South Africa with dealing with cyber threats and attacks. The results evidenced multiple contributors to the success of attacks by threat actors. It would take a concerted effort by all stakeholders to mitigate the threats faced by the banks. From the responses, it emerged that to mitigate the threats; efforts would need to be applied to improving the cybersecurity culture within organisations and provisioning more resources, including skilled security professionals and the financial resources required to obtain the necessary tool and security assessments to identify and mitigate threats. Security needs to be viewed as an enabler of business. This would enable security to widen its scope within organisations and actively analyse and prioritise risk. The overall theme that emerged from the findings was that the issue of security needs novel approaches that would employ a three-pronged approach of people, process, and technology.

The study's limitations were the adoption and implementation of POPIA, which limits the sharing of personal information without the express consent of the data subjects; the implications were that identified participants and respondents to the study could not

share details of potential respondents and participants without first acquiring their consent. Furthermore, the participants of the semi-structured interviews were employees from the big five commercial banks in South Africa. Due to this, the study's findings portray views mainly of the big five banks.

Future research may be performed to investigate the impacts they have on commercial banks and to determine if the regulations have had a positive effect on cybercrimes and cybersecurity within the country. To gather a more comprehensive picture of the threats and patterns of attacks faced by banks, further studies could focus on obtaining the necessary permissions and clearance to study this nature within the banks. This will enable better data collection and access to information that is not publicly available due to its sensitivity.

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Effect of Self-Reliant Policy on FDI in India: Case Study of Automobile Multinationals

By Diya Mittal

Abstract- South Asia shows a trend of being the most critical location for foreign investors, especially the case of India, and it is ready to liberalise its FDI regulations further to boost FDI inflows. The car industry is one of India's most significant economic development drivers and a sector with significant involvement in international value chains. The COVID-19 epidemic had a significant influence on the volume of FDI inflows. However, the Indian government's remarkable resilience led to significant policy changes and prompt decision-making that lessened the impact and allowed the industry to forge its course among India's industrial sectors. While addressing the dearth of study on "self-reliant policy 2020," which incorporates the subject of "Make in India and Make for the World" among international business experts, this dissertation seeks to improve upon current institutional theory on FDI literature.

FDI inflows in India increased as the automobile and automotive component industries expanded into electric vehicle segments. This paper examines the roles of government policy, infrastructure, and other enabling variables in that development. This research is accomplished by adopting a qualitative approach and a research design based on various case studies focusing on the recent FDI decisions made by multinational automakers.

Keywords: FDI, location, government policy, emerging markets, multinational companies.

GJMBR-G Classification: JEL Code: F21



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Keywords: FDI, location, government policy, emerging markets, multinational companies.

I. INTRODUCTION

The context, rationale, goals, research questions, and objectives of this study are provided in this chapter, along with an introduction to the subject's fundamental ideas.

a) FDI and Background

As the world is going towards a significant globalisation process leading to the advancement of technology and information, there is an increasing rise of interest shown by nations in capturing foreign

investment in the form of FDI (Borowicz, 2020). In the global battle for investment resources, MNCs' interest in procuring financial incentives from governments is seen as a common phenomenon to take up substantial investment projects (Mudambi, 1999). Through globalisation, a high degree of economic integration is achieved as there is a continuous flow of money from one nation to another in the form of FDI.

Businesses find it more suitable to establish their subsidiaries in a foreign country to achieve a comparative advantage not achieved by just importing and exporting certain products (Boghean and State, 2015). Some governments induce protectionist policies to safeguard local businesses and the economy and, therefore, impose FDI limitations such as local content requirements; if the limitations imposed by the government can show positive externalities in other nations, then the government might remove these protections and adopt similar policies to boost their economic growth (Varamini and Kalash, 2010). Modifications were made regarding attracting FDI by lowering import taxes, financial incentives, tax legislation, and training subsidies (UNCTAD, 2000). The simple rationale for the increased efforts to attract FDI stems from believing that FDI promotes growth (Herzer and Klasen, 2008).

For example, FDI may spur capital accumulation in developing nations, thereby accelerating further industrialization, whereas in industrialized nations, FDI is an effective channel for introducing new technology and production and labour practices (Cipollina et al., 2012). In other words, the consequences of FDI can be both good and harmful (Mencinger, 2003). FDI may bring gains for some parties and their supporters while causing losses for others. For instance, skilled workers may benefit from FDI because it boosts wages and labour demand, while local business owners may lose out because it boosts competition, which reduces their profits (Pinto and Pinto, 2008; Owen, 2019) cited in (Jiang et al., 2022)

b) Research Topic

By purchasing existing companies abroad or starting new ones, foreign direct investment entails the purchase of control shares, according to (Boghean and State, 2015) other examples of foreign direct investment include an equity increase of a subsidiary located abroad or a loan given to the division by the parent company. The research thoroughly examines the impact

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of host government policies on FDI inflows in the target market. The research is focused on India, a rising economy, and its self-reliant strategy, which intends to expand the Indian capital market in several industries.

The study will draw on various theoretical frameworks and literature to examine FDI and its impact on the host nation. The Hofstede cultural dimensions assist the multinational in adapting to the cultural environment (see appendix 9), which is essential for an MNC entering a target market to make a profit. Additionally, the OLI framework and internationalization theory assist in determining a market's potential strength while considering FDI location variables. The research will concentrate on the institutional theory of FDI, which explains how the host country's institutions affect the growth of foreign investments. The study will be conducted using qualitative analysis, and a deductive method of data analysis will be used to locate and conclude the report. Because the theory will be used as a foundation, interpretation and in-depth examination will follow.

Given that India is an emerging and rapidly expanding economy in the east, it is essential to comprehend FDI patterns and international companies' investment decisions here. Multinational corporations, particularly those in the automobile industry, can therefore detect essential patterns and flows in the Indian economy. The Indian government also plays a significant role in crafting policies that are more nationalist and less dependent on imports. In practically every industry, India's economy is currently the one that is expanding the fastest in the globe, surpassing most wealthy nations. India is overtaking China to become a more essential and significant partner for other nations, whether in the fields of defence, fast-moving consumer products, manufacturing, or services. MNCs in the automotive sector must invest in the nation since it directly influences top-level management's decisions on investments into the Indian economy as it impacts the businesses' supply chains and production, leading to a review of the corporate and business strategy.

c) *Research Objective and Questions*

Understanding the relationship between MNCs operating in the automotive industry and host government legislation is the goal of the study project. Second, the study would aid in analysing the variables impacting FDI in India and the contribution of FDI to economic expansion. Finally, it strives to increase awareness of the sectors that are expanding because of policies and investments in the Indian economy, assisting potential MNCs to make adequate investments in the future, leading to understanding the question:

Research Question: How does the "self-reliant India" policy affect the decision of automobile multinationals on FDI in India?

There are questions which are not explicitly asked but will be answered during the research project:

Question 1: what are various government initiatives to attract FDI in the automobile industry?

Question 2: why MNC'S are looking forward to shifting production plants from China to the neighbouring country India?

There has been thorough documentation on the influence of FDI on the host country, with advantages and disadvantages, in previous literature. Surprisingly, few prior empirical studies using strict econometric methodology have examined the connection between FDI and the host country's national economic development. While numerous and growing micro-based studies examine the productivity-enhancing impact of FDI on specific enterprises, such as (Aitken et al., 1996), these studies do not address whether to invest in a nation where the political landscape is changing. Because of this, the earlier studies failed to demonstrate the potential of FDI regarding the government's active involvement in fostering economic independence, the establishment of manufacturing facilities inside the nation, and the geographical issues considering shifting global economic conditions. The changing landscape has raised the question of how a policy change may affect MNCs and their strategy.

II. THE EMPIRICAL LITERATURE: REVIEW AND CRITIQUE

a) *Introduction*

The effect of host government policies on FDI in host nations is the subject of substantial empirical research. The critical contributions are reviewed in this part, and the empirical techniques used there are criticised. Numerous arguments have been made on how foreign direct investment affects the growth of the host economy. With the global surge in FDI, officials in developing nations began to focus more on luring in more foreign investment. Many nations have actively given tax incentives and subsidies, and most have lowered their barriers to FDI. The belief that FDI fosters growth is the primary justification for the increased attempts to attract FDI (Forte and Moura, 2013).

An all-encompassing framework for figuring out the scope and pattern of operations with foreign ownership is provided by Dunning's eclectic paradigm. It asserts that three sets of advantages-ownership, location, and internalisation (OLI) advantages-motivate multinational operations. The arrangement of these benefits motivates or deters a company from engaging in international business and becoming an MNC. By observing, for instance, that a firm's internalisation benefits are driven mainly by transaction cost concerns, the paradigm's all-encompassing character may be recognised (Ram, M., 2004). North has contributed to our knowledge of institutions at the macro level more

than any other academic (North, 2005). Norms of behaviour, conventions, and self-imposed standards of behaviour are examples of informal limitations that North (2005) characterises as institutions. Formal rules include constitutions, laws, and regulations. The “rules of the game” are established by institutions (and their enforcement mechanisms), which organisations must abide by to achieve their learning and resource allocation objectives. (Dunning and Lundan, 2008)

“New institutional theory” Scott (1987); North (2005) has an impact on the overarching approach. According to this view, host nation institutions considerably impact how enterprises are governed. From an economic perspective, the core of modern institutional theory is that countries with institutions that permit markets to operate freely have more significant economic growth. The argument continues by saying that, as a result, it should be employed cautiously in countries like Japan and India, where a more interventionist (or nationalistic) approach to forming economic policy has traditionally been adopted (Buckley et al., 2014). The study of endogenous growth has also shown the importance of other variables, such as institutional framework, infrastructure, and macro-economics, in fostering growth. In addition to their positive effects on economic performance, many factors may influence a country’s ability to benefit from incoming FDI flows and attract FDI. Some academics even claim that the interaction between FDI and these specific local characteristics ultimately decides the growth outcomes (Alguacil et al., 2011). A stable institutional framework may increase FDI spillovers because of its direct influence on business operating circumstances (Alguacil et al., 2011).

Foreign direct investment inflow has significantly increased due to trade liberalisation, which also benefits the development of emerging nations (Khan et al., 2022). Numerous studies have been conducted to determine whether attracting FDI could be a critical strategy to foster growth in developing countries due to the rapid pace of FDI inflows worldwide. To assess the effectiveness of policies that implement incentives for foreign investors, a response to this issue is essential (Alguacil et al., 2011).

b) *Human Resources*

The increase in the labour force or human resources is one way that FDI might influence the economic development of the host nation. This pathway could make both good and adverse outcomes more likely (Forte and Moura, 2013). De Mello Jr (1997) asserts that it is anticipated that FDI will increase labour force knowledge by offering training by introducing new techniques and production and management practises. MNC investments in the host market will aid in developing human capital through training offered to boost productive capacity by effectively and efficiently

completing a job that, in turn, promotes economic growth (Ozturk, 2007).

Learning that employees gain from seeing new operations being established by multinationals is one method of enhancing the human capital of the host country (Loungani and Assaf, 2001; Alfaro et al., 2004). The labour force must be proficient in using new technologies since FDI serves as a vehicle for their acceptance in the host nation. It frequently happens that the host country’s capability is lacking, which prompts international corporations to give the necessary training (Borensztein et al., 1998). Multinational corporations offer more training opportunities than regional businesses, claims the OECD (2002). This training is given by utilising new technology, techniques, and methodologies that local employees cannot govern and may restrict its application (Borensztein et al., 1998). Multinational corporations’ training programmes have an impact on the national economy. According to Hanson et al. (2001), local businesses will hire these employees once they have completed training sessions supplied by global businesses. According to Lim (2001), many employees utilise their newly acquired knowledge to find their businesses, after which they impart their expertise to their employees. According to the OECD (2002), multinational corporations are also accountable for enhancing host country training since they convince local authorities that a skilled work force is essential.

Additionally, FDI inflows have a detrimental impact on the labour force. High-tech use by multinationals predicts that fewer people will be required than those employed by local businesses, and these businesses may be replaced by others that employ fewer workers, which would increase unemployment as a result (OECD, 2002). The scenario described by Ford et al. (2008) is another one in which local businesses will experience a decrease in local government assistance. These authors highlight instances in which local governments have reduced public spending in this area, which harms the training of the labour force provided by FDI, after confirming that multinational corporations are a source of training, thereby raising education levels in the nation (Forte and Moura, 2013). Due to the lack of R&D opportunities in the host nation, employees with advanced degrees may choose to leave the country, according to another observed effect (Vissak and Roolah, 2005).

c) *Technology*

A good or negative effect on the economy’s expansion may result from transferring technology and know-how through FDI. Multinational corporations are substantial business buildings specially developed and outfitted with the most recent technology. (Forte and Moura, 2013). Because multinationals have such a large global footprint, they are seen as a significant source of technology dispersal. (Ford et al., 2008). Due to their

fierce competition, multinational corporations are accountable for spending more on research and development than any other company. (Borensztein et al., 1998)

An essential role is played by technology in the development of an economy; a specific economy growth is measured by the advanced technology used by institutions, governments and businesses which will lead to innovations in the country. Economic growth in developing economies, according to Borensztein et al. (1998), depends mainly on the technology employed by the nation. According to Lim (2001), Investors frequently invest in rising economies, which results in a flow of capital and, consequently, a steady flow of knowledge and technology. Dutt (1997) claims there have been trends of decreasing employment as the advanced economies invest in the southern countries having lower wages and higher productivity. According to (Loungani and Assaf, 2001), this transfer may result in benefits that cannot be obtained through financial expenditures or the acquisition of goods and services. Varamini and Vu (2007) claim that the host Economy's GDP increases when businesses adopt more advanced technologies to boost their output. A decrease in R&D expenses is brought about by the availability of new technology that multinational corporations have launched. As a result, these businesses will be able to lower expenses and increase their competitiveness (Berthélemy and Demurger, 2000).

Technology transfer, however, can sometimes have unfavourable consequences. According to Vissak and Roolaht (2005), innovations by multinational corporations and other wealthy nations will increase dependence on the host nations. According to this report, local businesses are becoming less interested in creating innovative technology. In order to maintain their technological edge over local businesses, Şen (1998) argues that MNCs may respond negatively to host country research. Furthermore, the author points out that multinational corporations spread incorrect technology with the same intent. In these conditions, reliance on international companies' technologies will continue in the host country (Forte and Moura, 2013). Indeed, according to scholars, technical innovations are increased in the host nations, which require training to effectively use human resources (Alfaro et al., 2004). The increase in technology will pressure local businesses that are not capital-intensive (Mastromarco and Simar, 2015) and spread frontier management approaches (Bloom et al., 2012).

d) *Firms Development and Organisation*

Hansen and Rand (2006) assert that the flow of capital into the host country unquestionably improves the business climate and spurs economic growth. Companies in the host country alter because of FDI. It is found that Local businesses are notably affected by

such changes in two circumstances. Multinational corporations can join markets when entry barriers for local businesses are high, thanks to their superior skills. According to Blomström and Kokko (1998), The entry of multinational companies may cause the business climate in the host country to shift structurally by destroying industry monopolies and boosting competition.

According to OECD (2002), FDI is done through a takeover or a privatisation process that modifies the host nation's structure. If the multinational's procedures are more effective than those in use, efficiency benefits will result, making the adjustments even more crucial. Local businesses' organisational structures are altered by mimicking international corporations' more effective organisational designs (Hansen and Rand, 2006). According to Zhang (2001), FDI has caused several changes in Chinese business. Before becoming publicly traded, businesses became private or entered public-private partnerships, sometimes due to joint ventures with foreign investors. Zhang (2001) noted another phenomenon: policy changes were accelerated by modifications to the laws and market operating procedures for an economy that approximates an open market.

e) *Implementation of Social Policies*

Making policies and initiatives to put them into effect is challenging since the host economy may face many difficulties. In reality, the complexity, if not impossibility, of anticipating FDI inflows makes them causes of instability (Vissak and Roolaht, 2005). This complexity might hinder the implementation of the local authorities' desired economic strategies and undermine the nation's economic growth (Şen, 1998; Vissak and Roolaht, 2005).

A sudden, large capital influx that would likely boost inflation in proportion to that inflow is another negative development for the host country's economy (Şen, 1998). Another negative impact of FDI in the host country is a reduction in the power of local authorities (Duttaray et al., 2008). Businesses that conduct international trade have enough control over resources. As a result, they frequently show interest in geopolitics, which might allow businesses to impact political and economic decisions. (Zhang, 2001). Additionally, multinational corporations pressure local officials to fulfil business goals, which may lead to the adoption of laws unfavourable to the host nation's economic progress (Zhang, 2001).

Due to the capital-intensive nature of MNC investments, they significantly influence local governments and enterprises. If their strategic decisions contradict a nation's interests, the host government may be forced to adjust its policies significantly. (OECD, 2002). It is also argued that developed nations often use FDI as a source to exert influence on emerging

economies by way of constant capital flows, according to Zhang (2001). Multinational corporations support the sustainability of the current economic system, according to (Loungani and Assaf, 2001).

f) *Integration into Global Economy*

Capital flows from countries help integrate host nations and the global economy with the help of FDI (OECD, 2002). Mencinger (2003) provides evidence by establishing a direct connection between the rise in FDI and quick integration into the world market. Economic growth is generated due to the country's opening up and integration into the global market (Barry, 2000). Local businesses are integrated into the global market by imitating and acquiring the information that multinational corporations have, according to Blomström and Kokko (1998). Since they have previously through this process, it is evident that multinationals have a greater understanding of internationalisation. The ability to sell effectively, the construction of networks, and the growth of worldwide lobbies are only a few of the significant competitive advantages multinational corporations enjoy.

According to Ford et al. (2008), MNCs frequently collaborate with local firms in the host country to connect with organisations and suppliers in a global network. Local firms thus can expand their presence globally and create strong connections. Additionally, it states that local governments could build infrastructures (particularly those related to transportation) in response to requests from multinational corporations. These infrastructures will help promote international trade and help local businesses to expand internationally. Gunaydin and Tatoglu (2005) support this claim, stating that these FDI effects make it easier for raw materials to be distributed across the host nation. When investment is limited to assembly lines, both the rise in component imports and the rise in exports of finished goods are evident (Zhang, 2001). According to Makki and Somwaru (2004), the rise in exports by FDI encourages local businesses to boost productivity by using their capacity and access to economies of scale.

However, the host nation may suffer from the FDI's increased integration into the world economy. According to Vissak and Roolaht (2005), FDI is the most straightforward way for economic issues to spread globally, particularly in the nations where multinational corporations are based. The integration into the world market is the cause of this issue. The economies of the hosts open and become more susceptible to changes in the global economy. According to Mencinger (2003), Due to increased imports from foreign economies, FDI influx might result in a trade imbalance for the host country. As a result of emerging countries' lack of self-sufficiency, businesses typically import raw materials from other countries to use in their production. This import of raw materials raises the nation's imports

(OECD, 2002), and occasionally exports may not increase in tandem with an increase in investments because businesses' primary motivation for investing is to meet local market demand. (Ram, R. and Zhang, 2002).

g) *Increased Competition*

According to Lee and Tcha (2004), FDI dramatically aids in developing factors of production due to the rivalry it promotes, allowing firms to more efficiently complete their tasks and raise their part of the wealth. Local businesses are forced to compete to keep their market shares due to multinationals' increased supply of the host country's market (Pessoa, 2007). There may be drawbacks to the heightened competitiveness as local businesses spend more on R&D, and in some instances, they exploit the advancements gained to expand their market share and turn suppliers for global corporations (Blomström, 1986). Existing businesses are pressured by multinationals' rivalry to advance their technologies and business practices (Driffield, 2001; Varamini and Vu, 2007). Consequently, local businesses frequently invest in their staff and equipment (De Mello Jr, 1997). FDI is typically viewed as a strategy to increase domestic competitiveness in a nation. As a result, output increases, and the market stabilises efficiently using the production's resources. (Pessoa, 2007).

However, the host nation does not benefit only from the enhanced competitiveness brought forth by FDI. Multinational corporations currently here will utilise their clout with the authorities to ensure that the highly protected market position does not alter. Multinational corporations maintain their market position by avoiding host country capacity and supply increases. There by it helps preserve the use of the resources that are already accessible while preventing development through increased competition (Loungani and Assaf, 2001). Zhang (2001) and Ram, R. and Zhang (2002) argue that greater competition brought on by FDI necessarily results in Local companies with limited resources and investments closing their businesses, which might result in a more centralised industry with less competition.

According to Hanson et al. (2001) and Zhang (2001), not all participants in the national economy have seen an increase in income. Although government incentives enhance national income with the influx of FDI from the world, it also creates a challenging environment for domestic businesses to operate in, which results in the disappearance of businesses. According to Sahoo and Mathiyazhagan (2003), a condition of global oligopoly can develop. Sylwester (2005) asserts that international corporations are better able to recruit highly trained individuals than local businesses, either by displacing them or making it more difficult for them to hire these workers. Due to its less complex structure than that of international corporations, local enterprises

may also be negatively impacted by the growth in FDI. According to Vissak and Roolaht (2005), local governments incur additional expenses to encourage FDI. As a result, it is vital to cut back on government spending.

Financial markets-particularly those in host nations-often provide some funding for international corporations. It is anticipated that the market would be impacted by the country's increased financial demands, resulting in changes to credit availability and pricing (Lim, 2001; Carkovic and Levine, 2005; Sylwester, 2005). Local businesses will find it more challenging to secure loans because multinationals financed in the destination nations reduce their capacity to do so. Due to the financing rivalry, some local businesses could decide not to make the essential expenditures for their growth or their upkeep, which might finally result in its oblivion.

When reading the empirical literature on FDI and growth, it is essential to process carefully as the issues persist. However, the data tends to indicate that the inflow of FDI in emerging markets shows an upward trendline for growth in major economic sectors, except Carkovic and Levine (2005). Discrepancies in the factors examined may explain this. FDI impacts the host country either favourably or unfavourably, depending on the circumstances surrounding the investment and the host nation. As we can see, outcomes are influenced by the surroundings of the host nation. Local government agencies play a crucial role in achieving the intended results in this way.

h) Research Gap

Many emerging Asian governments have been implementing different economic changes, notably on the supply side, as a countercyclical response to decreased FDI. For public infrastructures to compete in attracting FDI in essential industries, their number and quality must be improved. Financing public capital projects is a problem for many developing nations in the Asian area, particularly for those with current account deficits. These deficits are made worse by the requirement of high-tech imports for many infrastructure projects, which results in a negative trade balance and a decline in GDP.

Many of the works have discussed the impact of government policies on economic development and the ownership-location-internationalisation framework of Dunning. However, none of them has emphasised the significance of the relationship between multinational corporations' investment decisions and changes in governmental policies. Expansion of the economy through FDI is discussed in past literature on various levels, but it has forgotten how government policies impact the choice of multinationals to invest in each country.

III. RESEARCH METHODOLOGY

a) Research Design: The Basics

This study fills a knowledge gap regarding the variables that affect top-level management's decision to make FDI investments concerning the government of India's "self-reliant India" policy, which will allow India to become a hub for global manufacturing and serve as a supplier to the rest of the world in several sectors. The research on the cause-and-effect relationship between "self-reliant" policy and FDI in India is lacking, which is why this study was undertaken. Furthermore, a thorough policy analysis is necessary for a real-world environment to conclude.

The study topic context is interpreted and catered to using a multidisciplinary approach and a qualitative research method. Multiple case studies support this study's empirical evidence. According to (Heale and Twycross, 2018), case studies help generalise the units and gain a deeper understanding of a person, event, or organisation, considering them as a single unit. According to Stake (2013), the multiple case study approach works best for research goals that advance theory creation and extension. According to Yin, R.K. (2009), the multiple case study technique enables the researcher to move between instances and analyse the variations within and between each case.

It is advised for researchers using case studies to look for both the standard and unique aspects of the case. These aspects entail giving extensive and in-depth thought to the case's circumstances, including its nature, historical context, physical environment, and other institutional and political contexts (Stake, 1995). Since the study was conducted using secondary sources, CEOs were the primary target group for developing the cases (organisation members who actively participate in decision-making and strategy development for the company). The MNC's home and host governments and the vital ministries were also involved in the data-gathering process. The study aimed to gather data and explore viewpoints on FDI and how government policies affect MNCs (see Appendix 3).

The case for the study was chosen based on international companies' investments in India, notably between 2014 and 2022, while significant laws regarding the private sector were being introduced. Clarifying the research issue and formulation of the study design is aided by classifying the case and case selection techniques. (Hyett et al., 2014). Additionally, because of the study's international restrictions, it was challenging to negotiate access with the relevant informants with first-hand experience with the studied phenomena. This challenge resulted in a case selection that was both constrained and compatible with the research challenge.

b) *Data Collection*

Secondary data in the form of published sources, including top-level management of international MNCs, were used because the primary focus of this paper is qualitative research. The research, therefore, went beyond individual organisations and management with the goal of decision-making, making it impossible to gather enough data to analyse through variables and perform a regression analysis properly. The Centre for Monitoring Indian Economy (CMIE), official publications from the Government of India, Reserve Bank of India, Ministry of Industry and Commerce, IMF, and UNCTAD, media interviews, and publications other than books, journals, and periodicals were among the additional reliable secondary data sources. The reference period for this study is from 2000 to 2021. The secondary data was chosen after thoroughly investigating the appropriate governmental bodies, supranational organisations, for-profit companies, and news sources that may offer trustworthy information on the subject.

Data from institutions like the World Bank and the OECD were added to the information provided by the relevant public bodies, notably the India Brand Equity Foundation. As a result, the risk of researcher bias in the sampling and selection of data was reduced by thorough research and using triangulation of data from a variety of sources in both the public and private spheres, which also increased the confidence that could be placed in the validity of the findings (Nielsen et al., 2020; Hurmerinta-Peltomäki and Nummela, 2006)

c) *Data Analysis and Interpretation*

According to Robert Stake (2005), the analysis looks at a subject to determine its individual or relative elements. According to (Stake, 1995), the case study method is intended to describe patterns in limited systems. In order to guarantee that all aspects of the case are assessed and accurately documented, a straightforward case study procedure is designed to ensure validity and potential bias by having a single truth to be confirmed by the researcher (Yin, R.K., 2009). As there is a presumptive idea or proposition that institutions are a factor in host nations for which to analyse facts or specifics, this case study research will utilise a deductive approach. Findings and discussions based on the critical characteristics of FDI attractiveness in the nation and various industries were thematised, and comparisons were made. These comparisons were made by generating a latent pattern, which was an integral approach to performing analysis.

As previously stated, it was not possible to obtain enough statistical information to guarantee quantifiable independent or dependent variables for conducting regression analysis and determining whether there was a correlation or a causal relationship between the new government policies implemented in

business environments and FDI attractiveness. Therefore, how the data was presented and interpreted was crucial to ensuring an analytical approach to give fresh perspectives and potential connections between the data and current theory (Birkinshaw et al., 2011). The different types and sources of data were compiled and synthesised using a variety of presentation techniques, including tables to compile qualitative data from various sources and the application of the quadruple model of collaboration to evaluate the role of networks between academia, government, the public, and industry (Afonso et al., 2012).

d) *Ethical Consideration*

Names and organisations were classified for secrecy, and care was made to alter any identifying wording that would reveal identification. Since no sensitive information was collected during the research's fieldwork or using sensitive data sources, only data that had already been published was used, and all ethical requirements were followed. Additionally, a university-affiliated independent internal review board examined each component of this research (See Appendix 9). This procedure was crucial to ensuring that the researcher adhered to ethical standards and boosting the reliability of the study.

e) *Limitations*

As the study topic asks, analyse how multinational corporations invest overseas in cross-border situations. In these circumstances, performing experiments or surveys raises severe concerns regarding the comparability and equivalence of data gathered from other nations, which results in a lack of comprehension and interpretation of the questions and, as a result, leads to the research reaching false conclusions. The possibility of biased reporting was present, particularly by state bodies aiming to highlight the country's advantages. The reporting was exceedingly probable in the case of investment promotion organisations, which promote investment in the regions but also have political and economic agendas.

Finally, the case study technique had drawbacks in that it concentrated on a single nation and raised questions about the generalizability of any conclusions. It is neither realistic nor viable for a single researcher to perform a more significant size study in many national contexts, even though doing so may result in more generalisable conclusions. Additionally, the case of India is supported by increases in FDI in recent years due to the country's status as a developing market, which raises the possibility that there are location-related benefits luring investors to these places. However, using a methodological approach that synthesised the secondary data available to provide new insights and suggested potential links between various factors and statements in dependable news

sources from representatives of firms involved in FDI in the nation, these limitations have been minimised as much as possible. It was gathered from various sources whenever available to evaluate the authenticity and dependability of the data.

f) *Expected Findings*

This study aims to understand how senior management choices about investments in a nation with dynamic market conditions are impacted. The objectives of the inquiries were to advance a deeper comprehension of the worldwide firm's decision-making process. The goal was to identify the fundamental tenets of the host government's policy and categorise them into themes and descriptions that an MNC operating in a new market could use as a guide and develop a strategy to lessen the impact of government policy on their business. It was anticipated that the themes would be varied and descriptive, depending on the type of private sector strategy used.

The study's findings reflect on host government institutions' potential to provide a safe environment for businesses to thrive and have a competitive market in which all the stakeholders benefit themselves. Moreover, these government-provided initiatives should be in the nation's interest at its core.

IV. THE EMPIRICAL ANALYSIS: RESULTS

a) *Introduction: The Study*

I will research the "AATMNI RBHAR BHARAT" (i.e., self-reliant policy) programme, which the Indian prime minister announced as a 20-lakh crore bailout from the covid epidemic in 2020. This package's primary goal was to support different areas of the Indian economy and help the industry become self-sufficient. The argument, which covers the seven years from 2014 to 2022, is about creating India's economy self-sufficient and includes topics like "local for global: make in India, make for the world" and "vocal for local." having a stable economy, a sizable young population, and increasing foreign direct investment. India has developed into a small-car manufacturing and assembly powerhouse capable of end-to-end production. Companies are now producing, assembling, and exporting to other countries. Indian manufacturers participate in global innovation networks and obtain

technologies from around the world to boost their R&D efforts. (Bhatti, 2023)

b) *Description of Samples: Process and Participants*

Many organisations' CEOs and senior management make up the more significant population. This study focuses on the demographic of automobile manufacturers active in the Indian market and potential investors. Six distinct organisations comprised the sample size and were established using saturation criteria. The selection made the sample more diverse (see Appendix 2). Intense research was done to find those in authority positions involved in organisational decision-making and strategy analysis. All the participants had owner positions in the companies they ran and were qualified to offer adequate answers to the study questions. Other countries' governments were also involved and contacted because the study subject is international.

c) *Research Methodology Applied to the Data Analysis*

According to (Stake, 1995), analysis is the process of looking at something to identify its pieces or how they relate to the whole. The researcher transcribed the media and pre-recorded interviews to look for trends. He then further analysed the replies to derive generalisable conclusions. The codes connected topics from various approaches, such as interviews, field notes, historical literature, archive data, and connecting data sources (Stake, 2013). Choosing the right tools to create comprehensive, accurate, and trustworthy themes to support the insights became paramount.

I reviewed the press releases, media stories, and information from DPIIT, ACMA, SIAM, and the Union Budget 2022–23. I referenced data from entries and examined archive data, including reports from the United Nations, the World Bank, and the Indian government, for triangulation techniques during the data analysis. This triangulation of data sources improved the study's quality and encouraged a more comprehensive data analysis (Yin, R., 2017). I examined and interpreted the study's findings in the context of the conceptual framework and provided examples of how the results contributed to the knowledge of institutional policies for FDI in the car industry and automakers' choices to invest in India.



Figure 1: Timeline for Self-Reliance India Policy

d) Description of Analysis

Thematic synthesis was used to examine the data gathered from the media interviews that were made accessible online, including the researcher's notes and the audio transcripts of the media interviews (Durst and Henschel, 2021). The recordings' audio was converted into written text using a specialised transcription service. The researcher concentrated on linking the trends they had discovered when identifying the four critical investing decisions made by the automobile sector in India. The researcher then created a codebook with categories, essential topics, supporting themes, definitions, and verbal excerpts from the interview transcripts. In addition, the researchers identified patterns and trends from the many interview transcripts by coding. The researcher then verified the authenticity of the coding material using the triangulation procedure before completing the codebook.

e) Results of the Study

To give answers within the framework of the empirical setting, the main research question for this theory-generating multiple case study was created following a thorough examination of the literature. Dense knowledge of the prospects presented by the execution of the policy and its consequences for the Automobile MNCs was provided by evaluating stakeholders' viewpoints regarding their ideas on the Indian government policy regarding the establishment of manufacturing plants in the nation. All the cases selected were constantly compared with each other throughout the research to contrast and analyse the thematic patterns among cases, and an analysis was conducted of the data collected from various sources (Yin, R., 2017). A detailed, dense commentary from each organisation was produced during this research phase to highlight each organisation's experiences and perspectives on the issue under investigation (Stake, 2005). The recurrent motifs were categorised, and the results were cross-referenced for visual representation.

f) Thematic Analysis of Textual Data

The literature offers step-by-step procedures that describe how to perform a pertinent and accurate theme analysis (Norris et al., 2017). I did a thematic analysis for this study following the (King, 2004) recommendation that the final report starts with direct participant quotes. Regarding the main study topic, this part examines and discusses the four themes that developed (see Appendix 1)

g) Economy

This subject focuses on creating the infrastructure necessary for the Indian economy to grow into a significant global supplier, including solid R&D facilities, affordable steel manufacturing, and the availability of a trained workforce. Due to beneficial government policies, India has recently become a desirable location for FDI. The Indian government has taken proactive steps in various initiatives to provide a favourable business environment which will boost India's FDI (IBEF, 2022a) but Organisation 5 believes that a revision of policies would be a viable solution to increase FDI in the country, saying:

"If there is some rationalisation of taxes, there will be more growth because the size of the market today does not reflect the kind of wealth and aspirations we have in this country." (Organisation 5, 2022)

Organisation 1 thinks that policies are favourable and said:

"We are happy to share with you that we are going to make an additional investment of \$54 million in the upcoming project despite the COVID-19 global pandemic." (Organisation 1, 2020).

The organisation's four perspectives on the subject matter were the following:

"Our product is being manufactured at the state-of-the-art factory in Chennai. The vehicle is made in India for the entire world, and we will continue to explore new markets to expand our international presence." (Organisation 4, 2023).

Table 1.1: Sectors Receiving Highest FDI (from April 2021-March 2022)

Industries	Software And Hardware	Automobile	Trading	Construction
Value (In US Dollars)	14.46 billion	6.99 billion	4.53 billion	3.37 billion

Table 1.1 demonstrates that the Indian automotive sector, the second-highest industry regarding FDI receipts, is crucial to macroeconomic growth and technical innovation.

Table 1.2: FDI Inflows from Countries

Countries	Singapore	USA	Mauritius	Netherlands
Value (In US Dollars)	15.87 billion	10.54 billion	9.39 billion	4.62 billion

Table 1.3: Indian States that Received the Highest FDI

Indian States	Karnataka	Maharashtra	Delhi	Gujarat	Haryana
Value (In US Dollars)	22.07 billion	15.43 billion	8.18 billion	2.70 billion	2.79 billion

Tables 1.2 and 1.3 show that FDI flows into the nation's bigger cities worldwide, suggesting that as cities increase, the economy will expand more quickly (IBEF, 2022b)

h) Infrastructure

This issue relates to establishing suitable electric vehicle supply equipment (EVSE) infrastructure for EVs, and to achieve this, several public sector businesses, ministries, and railways have joined forces to build the necessary infrastructure and produce the necessary components. Infrastructure also includes linking towns, cities, and the final mile of connection, including becoming digital and improving the transportation system, which will help businesses save money by lowering additional expenses. Organisation 5 suggests by saying:

"We are aiming, in the next 8-10 years, to fully electrify the portfolio and be an electric manufacturer here. The intention is to build the capability now and, depending on how demand develops ... increase the numbers." (Organisation 5, 2022).

Organisation 2 thinks that policies will promote sustainable business by mentioning the following:

"These measures will help create a vibrant and competitive local manufacturing ecosystem for advanced and green technologies at global scales, thus making India a strong manufacturing hub. the benefits will also trickle down the entire supply chain, thereby also providing a boost to the MSMEs." (Organisation 2, 2022).

Organisation 1, for example, mentioned that:

"That EVs are catching up and the prediction of 5% by 2025 and 30% by 2030 looks reasonable because there are many launches which are going to happen,

the infrastructure is improving, customer acceptance is there." (Organisation 1, 2022).

The government has started a US\$ 10 billion incentive programme to develop an ecosystem for semiconductors, display, and design in India because of the significance of semiconductors to the world economy (Desk, 2022). This will support the Indian EV market, which is anticipated to reach Rs. 50,000 crores (\$7.09 billion) by 2025 (IBEF, 2022c).

i) Demand and Supply Chain

This subject is about how demand for electric cars is increasing and how supply chains are being improved to meet that need locally and globally. Several automakers have recently begun making significant investments in various sectors of the business, but Organisation 6 holds the following views that are unfavourable to them:

"The company would like to test the demand for their product in the Indian market before committing to a facility as the government is unwilling to agree to those terms and has been trying to push to consider committing to a new production facility in India." (Organisation 6, 2022).

Organisation 4 believes that there has been a good demand for their product in the market by mentioning:

"Crossing the 2-lakh milestone in exports for the second consecutive year signifies the trust, quality, reliability, performance, and affordability of our products." (Organisation 4, 2023).

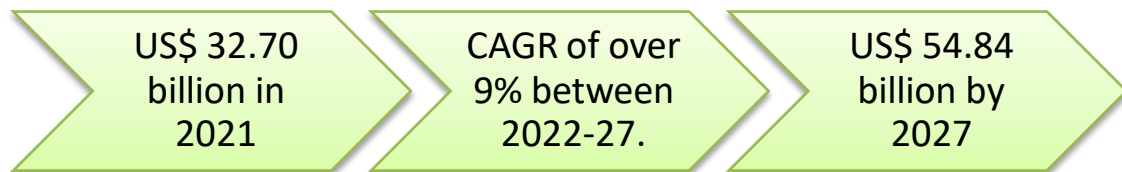


Figure 2: Value of the Indian Passenger Car Market

Figure 2 shows that by 2027, the passenger car market will be worth US\$54.84 billion and grow at a CAGR of more than 9%. New trends fuel the automobile sector to reach the target by 2027, including electrification and hydrogen cars for a sustainable economy and lowering carbon emissions (IBEF, 2022d). India now has a larger population than China. However, compared to India, where 200,000 automobiles are sold

monthly, roughly two million cars are sold there monthly. Indian subcompact automobiles, rather than the bigger, more expensive versions offered by global automakers, are often the most popular vehicles sold there (IBEF, 2022b).

j) Technology Driven Arrangements

This subject is about India improving its technological advancements to suit the demands of the

twenty-first century. India's EV industry is tiny, accounting for only around 1% of all auto sales there in 2022. It is quickly growing thanks to new models being planned by domestic and foreign companies. Organisation 2 gave the following information on this aspect:

"We pioneer of electrified technologies will continue to focus on mass electrification through localisation of electrified vehicle parts." (Organisation 2, 2022)

The participant also adds the following comments:

"Taxation, being linked to transparent, easily measurable outcomes aligned to national objectives such as carbon reduction." (Organisation 2, 2022).

Organisation 3 believes that advancement in technology will allow the company to produce electric vehicles by saying:

"The company has always reinforced its commitment to national policies such as the 'Make in India initiative' and it is pushing for battery electric vehicles (BEVs)." (Organisation, 2023).

In the same line of rationality, organisation 4 explains the following:

"The Indian government's initiatives on EVs are powerful, and customers want to buy EVs. This will make the country's conversion to EVs faster than other markets, and I hope even faster than the US. We want to become the No. 1 EV player in India." (Organisation 4, 2023).

Table 2.1: Developments in the EV Market in India

Industry	Target Goal	Reference
EV finance industry	Rs. 3.7 lakh crore (US\$ 50 billion) by 2030 (IBEF, 2022a)	NITI Aayog and the Rocky Mountain Institute (RMI) (IBEF, 2022a)
The EV market in India	CAGR of 36% until 2026	India Energy Storage Alliance
EV battery market	CAGR of 30% until 2026	India Energy Storage Alliance

The most recent developments in the EV sector related to start-ups, finance, and battery production are shown in *Table 2.1*. Numerous local and foreign organisations and businesses have made significant investments in each of the EV production areas. According to this table, the industries eager to engage in the Indian vehicle industry will continue to see growth in technology, infrastructure, employment, and demand. The data and conclusions presented illustrate the four primary focuses on which the Indian government is trying to create an open and transparent system that will enable a significant increase in foreign investment in the nation. To reduce costs, increase sales profits, and enable MNCs to develop their operations further and manage their value chains, the automotive industry needs to get its raw materials from nations with established manufacturing facilities.

V. DISCUSSION: THE FINDINGS

a) *Development of Human Resources*

According to De Mello Jr (1997) definition of human capital development, it is envisaged that FDI will boost labour force knowledge through training by introducing new techniques and production and management practises. My results confirm that the companies entering the Indian market have been involved in guiding and increasing human capital by developing training programs for the workforce as the economy and the global market shift towards electric vehicles.

Data from instances and reports I obtained supported (Borensztein et al., 1998) findings indicating that the host country's economic development increases if its human capital rises over a certain threshold. India's economy has grown slowly compared to other global economies since its human capital is inefficient. The findings of my investigation supported the notion that human capital is crucial for both businesses and the country. Positive trends indicate a demand for qualified human resources in the automotive sector as technical improvements rise.

b) *Advancement of Technology*

My findings support (Borensztein et al., 1998) claim that MNCs tend to invest mainly in their research centres to gain in a competitive market abroad, which will help the company increase its production capabilities and market share. This claim applies specifically to the evolution of technology in developing nations. My research's conclusions supported the many instances in which multinational corporations must establish their R&D facilities to serve local consumers and compete with domestic businesses. The study's results also align with assertions made by Varamini and Vu (2007) that the inflow of FDI brings in advance technology which improves host businesses' performance and, thereby, increases economies. Technology's rapid transformation can be seen in the nation's rapidly growing electric car market. The car sector is seeing a significant capital inflow, and as a result, local businesses are updating their technologies

to increase manufacturing, releasing their goods for sale, and even expanding their supply networks into global value chains.

According to the quadruple helix, innovation occurs when government, universities, citizens, and corporations coexist (see Appendix 5). It may also be viewed as a value chain activity in the car sector, where an economy like India must have robust coexistence and co-relation between these four helices for the industry to expand and which would draw new investors in the form of FDI to the nation. In addition, users (Civil Society) are co-producers of the invention in user-oriented innovation, according to (Etzkowitz and Klofsten, 2005), who also note the significance of research institutions, government support agencies, and businesses.

c) *Policies- Mobility, Infrastructure and Growth*

As the host government incentivises businesses, there is a surge in market competitiveness; therefore, businesses compete to gain market share (Pessoa, 2007). My findings supported the idea that local firms have a beneficial influence because they can compete with more giant corporations by using resources in their manufacturing processes effectively and efficiently. Aside from that, the host government's policies aid Indian markets' local industries. In India, local enterprises are transforming the country into a hub for global design and manufacture, attracting foreign companies to invest in the Indian market, and this trend is increasingly visible in the electric vehicle category. Because of this, there is an increase in productivity, a decrease in price, and better resource allocation (Pessoa, 2007).

Furthermore, multinational firms exert pressure on local government officials to achieve their corporate objectives, which may result in making or changing laws according to the needs of MNCs, which can harm economic development (Zhang, 2001). No evidence of MNCs influencing local authorities to change regulations to accommodate business requirements was found in my research; instead, it was discovered that the Indian government and authorities had established a solid framework for FDI policies and conducting business in the nation. The Indian government's initiatives in the car sector assist companies in growing their market share and locating their production facilities there.

According to some academics, local governments might develop infrastructure (especially in the transportation sector) in response to demands from multinational firms. These infrastructures will aid local companies looking to go global and encourage international trade. The findings of my study are consistent with other investigations into how a country's growing infrastructure benefits firms, particularly in the automotive industry, by lowering costs and enhancing operational effectiveness. The study partially agrees

with Blomström and Kokko (1998) research, which examined the likelihood that the entry of multinational corporations may weaken or end the existing monopolies in the car industry. These viewpoints frequently predicted that the industry would grow in the host country, and the results show that there has been an increase in brands competing for electric vehicles. However, some businesses ignored the Indian market, even though the initiatives were developed to grow the ease of doing business.

d) *Export- Oriented Nature*

The opening up of the nation and the ensuing integration of that nation into the global market, according to scholars, is what causes economic progress (Barry, 2000). India's decision to open its borders and liberalise its economy proves that it has grown steadily since international companies began investing there. Even though the car industry has not improved since at least 2014, government initiatives like "Make in India" and promoting a self-sufficient economy have encouraged the establishment of manufacturing facilities in the nation. Across cases in my study, there is still a need for action in several areas to increase the production of electric vehicles as the country is still reliant on acquiring raw materials, increasing its imports from nations like China because these are frequently unavailable (OECD, 2002) which in result affects the balance of payments Mencinger (2003).

The report also showed that businesses seek greater localisation strategies to seize raw materials and human resources as the global market shifts towards shared and autonomous vehicles. It may be argued that this does not mean conducting business in India is becoming more straightforward because of the investment. Instead, there is evidence that doing business in China is becoming more challenging because of the government's unfriendly policies, which makes India a fallback choice for establishing industrial facilities.

India scored more than 80 out of 100 on the ease of doing business index (see Appendix 7), indicating that the country's business climate is improving. Recent government changes in permitting private enterprises to participate in crucial industries serve as solid foundations to support the growth of India's economy and provide the nation with great potential to achieve economic independence. Additionally, Market Potential India (see Appendix 8) analyses the Indian economy's score between 2016 and 2022, showing a favourable growth potential for businesses looking to invest there, but it showed slow growth in some dimensions.

After conducting a critical analysis, I conclude that government initiatives in the host country positively impact giving businesses access to a competitive and developed market. Free trade agreements between

states are also beneficial since they encourage multinational corporations to invest more in particular regions, giving the company a geographical advantage. Businesses also frequently reduce the expenses of their manufacturing facilities, which leads them to request a tax break on their foreign investments. According to the study report, India will participate in the EV market with a long-term strategy focused on developing the necessary infrastructure for shared and autonomous cars with technology and people resources. Since the Indian economy is working diligently enough on the future of mobility and consumer perspectives on vehicles, the market for automobiles and auto componentry will experience a sharp increase.

My Study Led me to the Following Conclusion: Given that the Chinese government is making it more difficult for businesses to operate there due to geopolitical concerns and consumer hostility towards China, investing in India may be a fallback option for many global corporations. Therefore, it can be concluded that geopolitics and consumer aversion play a significant role in the country's ability to draw in significant amounts of foreign investment. Even though India is taking steps to become a developed country, businesses still view India as unstable and lacking the raw materials necessary to establish large-scale factories.

VI. CONCLUSION

a) *Research Objectives*

How does the "self-reliant India" strategy impact automobile multinationals' decisions on FDI in India? This is the research issue that this study seeks to address. The use of multiple qualitative case studies was put into practice. This approach was appropriate because the study's main objective was to analyse the decision-making procedures employed by multinational corporations when making investments in various nations. According to the survey, while the government has opened the country's economy and investment prospects to foreign investors through brownfield and greenfield projects, some corporations have favourable attitudes towards institutional policies. In contrast, others are restricted from making more investments.

In line with other studies, we discovered that the host government is crucial to a nation's ability to draw FDI. Numerous instances showed that the Make in India programme did influence their choices to invest in the nation, and they regularly highlighted examples like businesses setting up manufacturing operations in the nation. India, a rising economy, suffers significant setbacks compared to its neighbour "China" regarding innovation, people resources, etc. For India to sustain its low-cost advantage or at least attain competitive dominance in the future, innovation in new product creation is behind. Continuous technological advancement is required in manufacturing. With significant

investments in creating new indigenous technologies that are environmentally beneficial and conform to high-efficiency standards known worldwide, India may move up the value chain (Bhatti, 2023).

b) *Managerial Implications*

The following is a list of potential policy consequences. The results of this research, both at the organisational and institutional levels, suggest that organisations and institutions must cooperate; governments must offer safe and competitive investment environments, and businesses must invest in domestic projects to boost human resources, technology, and innovation as the nation's economy.

The host government's FDI policy and its effectiveness were shown to be significantly correlated. Local authorities must take the lead to achieve the desired results in the car industry since decision-making is much more dependent on the circumstances of the host nation and investments. Managers may be able to make decisions based on changes in local governments if they are made aware of this, creating the ideal environment for firms to maximise good benefits and lessen negative ones.

c) *Limitations*

I adopted a multiple case study technique to fill this gap, adhere to the qualitative paradigm, and lay a strong foundation for theory extension. To address the study's central research question, I gathered information from various sources, including archived data from government publications, media interviews, and corporate websites. The study's setting's limitations were identified and addressed. Although multiple case studies were employed, this prohibited a comprehensive analysis of the phenomenon being studied. Instead, it gave a general review of government policy related to the automotive industry. A detailed understanding of a single case would be beneficial to address the question thoroughly and might offer novel viewpoints.

According to Yin, R. (2017), the study's main flaw was the tiny sample size required for a qualitative multiple-case study. The sample size selected might not have represented the total population, which raises generalizability concerns, but from these investigations, hypotheses might be made for subsequent quantitative studies (Yin, R., 2017). Limited qualitative research can enrich pre-existing ideas and conceptual frameworks (Yin, R., 2017). This limitation was reduced by carefully analysing the data and drawing firm conclusions from the findings. I transparently and in-depth discussed each approach utilised for participant recruitment, participant interactions, data collection, recording, and analysis.

To some extent, using transcripts, digital recordings, and investigator triangulation served to lessen researcher bias. The Hofstede cultural index is also used in the study. The fact that Hofstede's

dimensions were based on a single corporation, which may limit their application to an entire nation, is only one of the criticisms that have been levelled at them despite their widespread usage in academia (Shaiq et al., 2011). Since Hofstede's breakthrough, several new methods for assessing culture have been created (Minkov, 2012). Therefore, to assess the external validity of this result, future research might repeat it using different cultural measures.

d) *Agenda for Future Research*

The study's findings thoroughly grasp the potential and difficulties global companies in the automotive industry would face while expanding into India. There are still certain restrictions even though every attempt has been made to make the most of the resources available to carry out an effective and efficient investigation. These restrictions were somewhat addressed through data triangulation, but future research on attracting FDI should consider whether primary data collecting is feasible, for instance, via contacting businesses participating in FDI initiatives. Future studies can also examine a nation's balance of payments, currency strength, and FDI flow through time in various industries. The data may then be compared

with different years of the host government's policy introduction. This comparison will provide a greater comprehension of the decision-making processes used by multinational corporations and their FDI investments.

Further investigation was needed when it was discovered that some of the most prominent players in the car industry left the nation, where government incentives to draw in foreign investment appear to have had a favourable impact on the choices of most multinational corporations. The logical inquiry is: why? Despite industry reforms, why do the big international corporations leave India? Although it is doubtful that more studies will refute the conclusions about the significance of solid government institutions and policies for luring FDI to the nation, it may be advantageous. A study on the overall influence on the economy for FDI attractiveness may bring fresh insights and variances or solidify the findings if future studies could identify the study issue outside the industry-specific context. This work is essential because it might contribute to a deeper comprehension of the phenomena under investigation and offer insightful advice for future research and policy initiatives (Yin, R., 2017).

Abbreviations

ACMA	Automotive Component Manufacturers Association of India
CAGR	Compound Annual Growth Rate
CEO	Chief Executive Officer
DPIIT	Department For Promotion of Industry, And Internal Trade
EV	Electric Vehicle
FDI	Foreign Direct Investment
FY	Financial Year
GDP	Gross Domestic Product
IMF	International Monetary Fund
MNC	Multinational Corporations
OECD	Organisation For Economic Co-Operation and Development
OLI	Ownership, Location, and Internationalization
QH	Quadruple Helix
R&D	Research and Development
SIAM	Society Of Indian Automobile Manufacturers
TH	Triple Helix
TNC	Transnational Corporations
UNCTAD	United Nations Conference for Trade and Development

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APPENDICES

Appendix 1: Thematic Analysis

Primary Themes	Secondary Themes	Concepts/Definition
<p>India was among the top three global FDI destinations. 80% of the global respondents had plans to invest in India. FDI restrictions have reduced from 0.42 to 0.21 in the last 16 years.</p>	ECONOMY	This theme concerns the economic circumstances that make India attractive to most foreign businesses and investors.
<p>Necessary to overhaul the country's transportation system.</p> <p>Create an integrated electric vehicle (EV) mobility ecosystem.</p> <p>Reform on Low carbon footprint and high passenger density urban transportation</p> <p>Investment of us\$ 180 billion in vehicle production and charging infrastructure</p>	INFRASTRUCTURE	This theme refers to constructing infrastructure around the country and expanding road networks for EV transportation. Increased infrastructure project expenditures will increase foreign direct investment (FDI) since ports, trains, and airports will be more conveniently accessible.
<p>There is a substantial market in terms of domestic demand and exports. In fy22, total passenger vehicle sales reached 3.07 million.</p> <p>The Indian automotive industry is targeting to increase the export of vehicles by five times during 2016-26.</p> <p>Foreign companies have adapted to cater to the large Indian middle-class population by dropping their traditional structure and designs.</p>	DEMAND AND THE SUPPLY CHAIN	The development of a successful supply chain for the domestic and international demand for vehicle products is meant by this. The use of supply chains will enable firms to reduce their transportation expenses and shorten the time it takes to reach customers.
<p>India is currently shifting focus to electric cars to reduce emissions.</p> <p>India could be a leader in shared mobility by 2030, providing opportunities for electric and autonomous vehicles.</p>	TECHNOLOGY-DRIVEN ARRANGEMENTS	Creating a technology geared towards the 21st century to meet the expanding demand and effectively increase output. Technology will also contribute to a sustainable environment and low carbon emissions.

Appendix 2: Participants/Organisation Profile

Firms	No. of Employees	Age of the Firm (In Years)	Years Abroad	Foreign Country Presence	International Market: Servicing Mode(S)
1	3000	75	50	Almost All Countries	Joint Venture
2	6000	26	10	70 Countries	Joint Venture and Export Oriented
3	5000	18	6	8 Countries	Alliance
4	150000	56	45	Almost All Countries	Export Oriented
5	2000	60	40	50 Markets	Alliance
6	129000	20	14	20 Markets	Alliance

Appendix 3: Government Initiative in Automobile (Ibaf, 2022)

Initiative	Meaning	Resultant
FAME INDIA SCHEME	Rs 871 crore (us\$ 117 million) Oil companies have installed 532 EV charging stations.	87,659 electric vehicles have been supported through incentives (STANDARD, 2022)
RELIEF IN FOREIGN DIRECT INVESTMENT	100% FDI allowed under automatic route with full delicensing	Automobile sector to attract us& 8-10 billion foreign investments by 2023. (STANDARD, 2022) They are making it easier for investors to set up manufacturing plants in India. Making India a leader in shared mobility by 2030
BHARAT NCAP	India's vehicle safety assessment program (STANDARD, 2022)	It will provide consumers with added security and safety. (STANDARD, 2022)
PRODUCTION-LINKED INCENTIVES	Increase local vehicle manufacturing and attract new investors. Added more than 100 advanced technologies, including alternative fuel systems such as compressed natural gas (CNG), Bharat stage vi compliant flex-fuel engines, electric control units for safety, advanced driver assist systems and e-quadri cycles investments. (STANDARD, 2022)	The 20 automobile companies have proposed a total investment of around RS. 45000 crore (us\$ 5.95 billion) and will create 7.5 lakh jobs in India (STANDARD, 2022)
BATTERY SWAPPING POLICY	Will allow drained batteries to be swapped with charged ones at designated charging stations. (STANDARD, 2022)	Making EVs more viable for potential customers
PRIME MINISTER'S GATI SHAKTI PLAN	India's national highways would be expanded by 25,000 km. (STANDARD, 2022)	It will provide seamless movement between places. Moreover, fuel costs will be saved, allowing vehicles to run for more extended periods.
VEHICLE SCRAPPAGE POLICY	It aims to phase out old polluting vehicles in an environmentally safe manner. (STANDARD, 2022)	It will allow companies to give a better deal to their consumers. This policy will make India more sustainable and carbon emission free.

A REVAMPED SCHEME	It Encourages the production and export of clean technology vehicles.	Us\$ 3.5 billion in incentives over five years until 2026 (STANDARD, 2022)
NATIONAL AUTOMOTIVE TESTING AND R&D INFRASTRUCTURE PROJECT (IBEF, 2022b)	Five testing and research centre have been established in the country since 2015 (IBEF,2022b)	Aims to develop India as a global manufacturing and research and development hub. (IBEF, 2022b)

Appendix 4: World Investment Report (Unctad)

Foreign direct investment (FDI) overview, selected years
(Millions of dollars and per cent)

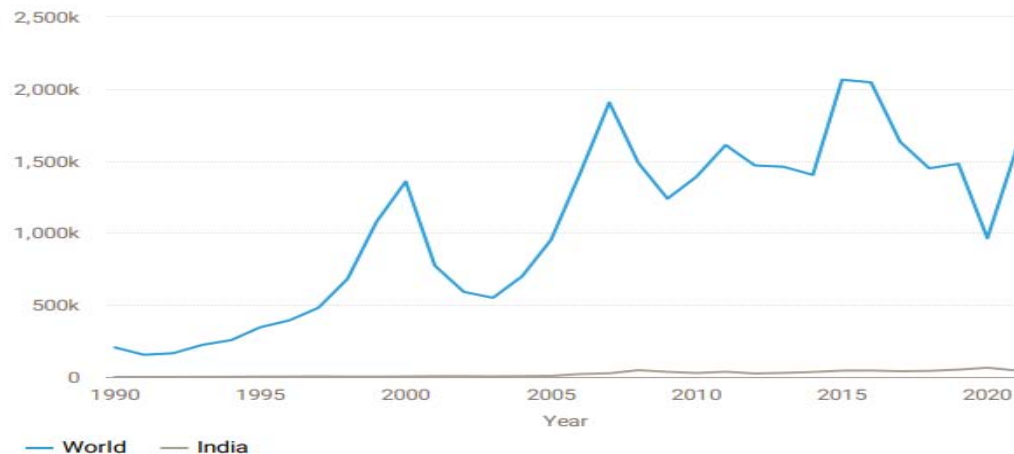
FDI flows	2017	2018	2019	2020	2021	2020-2021 Growth rate %	As a percentage of gross fixed capital formation					
							2017	2018	2019	2020	2021	
India												
Inward	39 904	42 156	50 558	64 072	44 735	-30.2	5.3	5.3	6.2	9.0	5.0	
Outward	11 141	11 447	13 144	11 109	15 522	39.7	1.5	1.4	1.6	1.6	1.7	
<i>Memorandum</i>												
China												
Inward	136 315	138 305	141 225	149 342	180 957	21.2	2.6	2.3	2.3	2.4	2.5	
Outward	158 288	143 037	136 905	153 710	145 190	-5.5	3.1	2.4	2.2	2.5	2.0	
Pakistan												
Inward	2 496	1 737	2 234	2 057	2 102	2.2	5.0	3.2	5.1	5.2	4.7	
Outward	52	-21	-85	-45	242	--	0.1	-	-0.2	-0.1	0.5	
South Asia												
Inward	51 640	52 262	59 086	70 957	52 417	-26.1	5.1	4.8	5.2	6.2	3.5	
Outward	11 493	11 630	13 275	11 206	15 986	42.7	1.1	1.1	1.2	1.0	1.1	
Developing Asia												
Inward	501 382	496 898	511 632	518 893	618 983	19.3	6.3	5.6	5.7	5.7	5.9	
Outward	400 135	360 653	336 213	378 382	394 118	-4.2	5.1	4.1	3.7	4.2	3.8	
Developing economies*												
Inward	694 955	694 956	716 170	643 949	836 571	29.9	7.4	6.7	6.8	6.2	6.9	
Outward	447 866	376 093	387 054	372 284	438 382	17.8	4.8	3.6	3.7	3.6	3.7	
World*												
Inward	1 632 639	1 448 276	1 480 626	963 139	1 582 310	64.3	8.1	6.6	6.6	4.4	6.4	
Outward	1 610 113	941 293	1 123 894	780 480	1 707 594	118.8	8.0	4.3	5.0	3.6	6.9	



Foreign direct investment flows

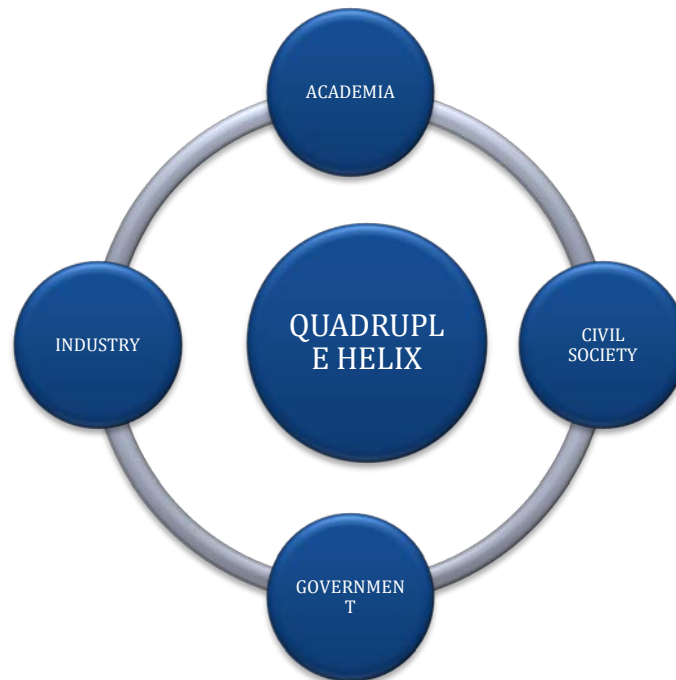
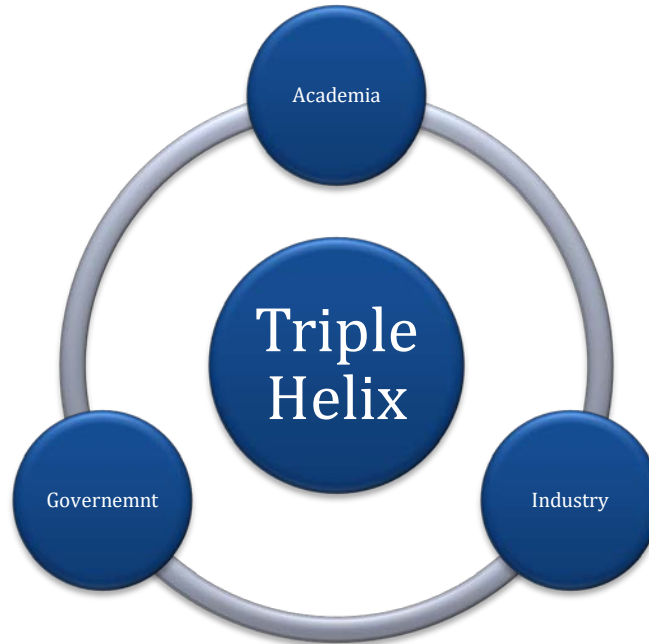
By selected region or economy in selected time period

Millions of dollars



Source: UNCTAD World Investment Report 2022

Appendix 5: Triple and Quadruple Helix Model (Carayannis and Campbell, 2009)



As civic society was included in the innovation hypothesis, the triple helix was expanded into the quadruple helix. It claims that the four helices are connected to innovation in an economy. Civil Society is involved in innovation and production, and it also plays a demanding role in our economy's consumption sector, where citizens (Civil Society) want to buy cutting-edge goods and services combined into a single, overall good. (Afonso et al., 2012).

Appendix 7: Ease of Doing Business Index (World Bank, 2020)

An economy's ease of doing business score ranges from 0 to 100, where 0 represents the lowest and 100 represents the best performance. A score of 80 in Doing Business 2020 would indicate that the economy is improving.

Economy	DB 2019	DB 2020
India	81	81.6
India - Delhi	81.3	82
India - Mumbai	80.5	81.2

World Bank. 2020. Doing Business 2020. Washington, DC: World Bank. DOI: 10.1596/978-1-4648-1440-2. License: Creative Commons Attribution CC BY 3.0 IGO

Appendix 8: Market Potential Index (Global Edge, 2022) (2016)

Rank	Country	Market Size	Market Growth Rate	Market Intensity	Market Consumption Capacity	Commercial Infrastructure	Market Receptivity	Economic Freedom	Country Risk	Overall Score
1	China	100	95	1	93	63	7	23	79	100
2	Hong Kong	2	59	100	44	100	100	100	100	57
3	Singapore	2	76	76	44	84	89	71	93	50
4	India	37	79	32	67	28	8	45	67	49
5	Japan	19	39	71	100	71	10	71	93	48
6	Canada	9	50	67	74	56	68	76	93	48
7	Germany	11	44	69	92	77	17	71	93	44
8	United Kingdom	8	42	78	87	79	16	73	85	41
9	Qatar	1	100	95	54	54	27	45	84	40
10	Switzerland	2	45	80	72	68	38	78	93	39

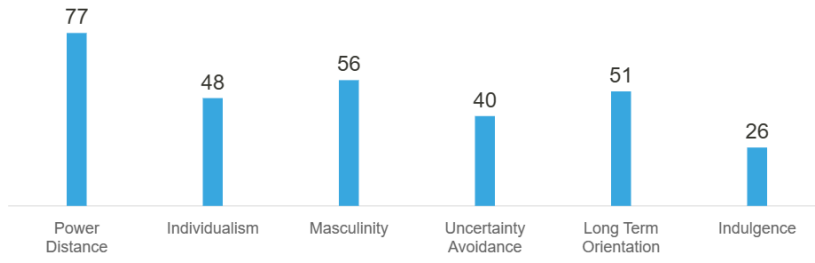
(2022)

Rank	Country	Market Size	Market Growth Rate	Market Intensity	Market Consumption Capacity	Commercial Infrastructure	Market Receptivity	Economic Freedom	Country Risk	Overall Score
1	China	100	87	1	100	100	10	27	66	100
2	Singapore	2	52	60	59	79	100	82	94	51
3	Hong Kong	2	40	89	58	85	86	42	78	46
4	India	37	67	22	39	46	10	54	51	45
5	Canada	6	40	57	63	52	54	92	94	42
6	Ireland	1	88	37	52	47	42	98	82	40
7	Japan	13	29	49	77	72	14	84	94	40
8	Switzerland	2	42	66	68	61	40	100	77	39
9	Netherlands	3	42	44	56	69	44	95	94	38
10	Germany	8	32	55	69	60	23	91	88	37

According to an examination of the market potential index, India is ranked fourth with a significant prospective market for launching a firm. India scored 49 overall in 2016, but when compared to 2022, the score dropped to 45, indicating a sluggish increase in market potential. Additionally, it demonstrates the potential for the car industry to boost consumer spending. However,

due to the pandemic in 2020, the Indian economy's market growth rate dropped.

Appendix 9: Assessing Cultural Fit (Hofstede, 1993)



* estimated



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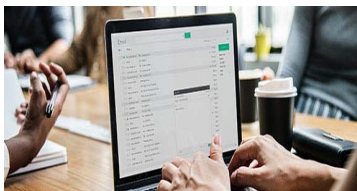
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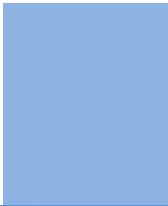
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PREPARING YOUR MANUSCRIPT

Authors can submit papers and articles in an acceptable file format: MS Word (doc, docx), LaTeX (.tex, .zip or .rar including all of your files), Adobe PDF (.pdf), rich text format (.rtf), simple text document (.txt), Open Document Text (.odt), and Apple Pages (.pages). Our professional layout editors will format the entire paper according to our official guidelines. This is one of the highlights of publishing with Global Journals—authors should not be concerned about the formatting of their paper. Global Journals accepts articles and manuscripts in every major language, be it Spanish, Chinese, Japanese, Portuguese, Russian, French, German, Dutch, Italian, Greek, or any other national language, but the title, subtitle, and abstract should be in English. This will facilitate indexing and the pre-peer review process.

The following is the official style and template developed for publication of a research paper. Authors are not required to follow this style during the submission of the paper. It is just for reference purposes.



Manuscript Style Instruction (Optional)

- Microsoft Word Document Setting Instructions.
- Font type of all text should be Swis721 Lt BT.
- Page size: 8.27" x 11", left margin: 0.65, right margin: 0.65, bottom margin: 0.75.
- Paper title should be in one column of font size 24.
- Author name in font size of 11 in one column.
- Abstract: font size 9 with the word "Abstract" in bold italics.
- Main text: font size 10 with two justified columns.
- Two columns with equal column width of 3.38 and spacing of 0.2.
- First character must be three lines drop-capped.
- The paragraph before spacing of 1 pt and after of 0 pt.
- Line spacing of 1 pt.
- Large images must be in one column.
- The names of first main headings (Heading 1) must be in Roman font, capital letters, and font size of 10.
- The names of second main headings (Heading 2) must not include numbers and must be in italics with a font size of 10.

Structure and Format of Manuscript

The recommended size of an original research paper is under 15,000 words and review papers under 7,000 words. Research articles should be less than 10,000 words. Research papers are usually longer than review papers. Review papers are reports of significant research (typically less than 7,000 words, including tables, figures, and references)

A research paper must include:

- a) A title which should be relevant to the theme of the paper.
- b) A summary, known as an abstract (less than 150 words), containing the major results and conclusions.
- c) Up to 10 keywords that precisely identify the paper's subject, purpose, and focus.
- d) An introduction, giving fundamental background objectives.
- e) Resources and techniques with sufficient complete experimental details (wherever possible by reference) to permit repetition, sources of information must be given, and numerical methods must be specified by reference.
- f) Results which should be presented concisely by well-designed tables and figures.
- g) Suitable statistical data should also be given.
- h) All data must have been gathered with attention to numerical detail in the planning stage.

Design has been recognized to be essential to experiments for a considerable time, and the editor has decided that any paper that appears not to have adequate numerical treatments of the data will be returned unrefereed.

- i) Discussion should cover implications and consequences and not just recapitulate the results; conclusions should also be summarized.
- j) There should be brief acknowledgments.
- k) There ought to be references in the conventional format. Global Journals recommends APA format.

Authors should carefully consider the preparation of papers to ensure that they communicate effectively. Papers are much more likely to be accepted if they are carefully designed and laid out, contain few or no errors, are summarizing, and follow instructions. They will also be published with much fewer delays than those that require much technical and editorial correction.

The Editorial Board reserves the right to make literary corrections and suggestions to improve brevity.



FORMAT STRUCTURE

It is necessary that authors take care in submitting a manuscript that is written in simple language and adheres to published guidelines.

All manuscripts submitted to Global Journals should include:

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The title page must carry an informative title that reflects the content, a running title (less than 45 characters together with spaces), names of the authors and co-authors, and the place(s) where the work was carried out.

Author details

The full postal address of any related author(s) must be specified.

Abstract

The abstract is the foundation of the research paper. It should be clear and concise and must contain the objective of the paper and inferences drawn. It is advised to not include big mathematical equations or complicated jargon.

Many researchers searching for information online will use search engines such as Google, Yahoo or others. By optimizing your paper for search engines, you will amplify the chance of someone finding it. In turn, this will make it more likely to be viewed and cited in further works. Global Journals has compiled these guidelines to facilitate you to maximize the web-friendliness of the most public part of your paper.

Keywords

A major lynchpin of research work for the writing of research papers is the keyword search, which one will employ to find both library and internet resources. Up to eleven keywords or very brief phrases have to be given to help data retrieval, mining, and indexing.

One must be persistent and creative in using keywords. An effective keyword search requires a strategy: planning of a list of possible keywords and phrases to try.

Choice of the main keywords is the first tool of writing a research paper. Research paper writing is an art. Keyword search should be as strategic as possible.

One should start brainstorming lists of potential keywords before even beginning searching. Think about the most important concepts related to research work. Ask, "What words would a source have to include to be truly valuable in a research paper?" Then consider synonyms for the important words.

It may take the discovery of only one important paper to steer in the right keyword direction because, in most databases, the keywords under which a research paper is abstracted are listed with the paper.

Numerical Methods

Numerical methods used should be transparent and, where appropriate, supported by references.

Abbreviations

Authors must list all the abbreviations used in the paper at the end of the paper or in a separate table before using them.

Formulas and equations

Authors are advised to submit any mathematical equation using either MathJax, KaTeX, or LaTeX, or in a very high-quality image.

Tables, Figures, and Figure Legends

Tables: Tables should be cautiously designed, uncrowned, and include only essential data. Each must have an Arabic number, e.g., Table 4, a self-explanatory caption, and be on a separate sheet. Authors must submit tables in an editable format and not as images. References to these tables (if any) must be mentioned accurately.



Figures

Figures are supposed to be submitted as separate files. Always include a citation in the text for each figure using Arabic numbers, e.g., Fig. 4. Artwork must be submitted online in vector electronic form or by emailing it.

PREPARATION OF ELECTRONIC FIGURES FOR PUBLICATION

Although low-quality images are sufficient for review purposes, print publication requires high-quality images to prevent the final product being blurred or fuzzy. Submit (possibly by e-mail) EPS (line art) or TIFF (halftone/ photographs) files only. MS PowerPoint and Word Graphics are unsuitable for printed pictures. Avoid using pixel-oriented software. Scans (TIFF only) should have a resolution of at least 350 dpi (halftone) or 700 to 1100 dpi (line drawings). Please give the data for figures in black and white or submit a Color Work Agreement form. EPS files must be saved with fonts embedded (and with a TIFF preview, if possible).

For scanned images, the scanning resolution at final image size ought to be as follows to ensure good reproduction: line art: >650 dpi; halftones (including gel photographs): >350 dpi; figures containing both halftone and line images: >650 dpi.

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TIPS FOR WRITING A GOOD QUALITY MANAGEMENT RESEARCH PAPER

Techniques for writing a good quality management and business research paper:

1. Choosing the topic: In most cases, the topic is selected by the interests of the author, but it can also be suggested by the guides. You can have several topics, and then judge which you are most comfortable with. This may be done by asking several questions of yourself, like "Will I be able to carry out a search in this area? Will I find all necessary resources to accomplish the search? Will I be able to find all information in this field area?" If the answer to this type of question is "yes," then you ought to choose that topic. In most cases, you may have to conduct surveys and visit several places. Also, you might have to do a lot of work to find all the rises and falls of the various data on that subject. Sometimes, detailed information plays a vital role, instead of short information. Evaluators are human: The first thing to remember is that evaluators are also human beings. They are not only meant for rejecting a paper. They are here to evaluate your paper. So present your best aspect.

2. Think like evaluators: If you are in confusion or getting demotivated because your paper may not be accepted by the evaluators, then think, and try to evaluate your paper like an evaluator. Try to understand what an evaluator wants in your research paper, and you will automatically have your answer. Make blueprints of paper: The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

3. Ask your guides: If you are having any difficulty with your research, then do not hesitate to share your difficulty with your guide (if you have one). They will surely help you out and resolve your doubts. If you can't clarify what exactly you require for your work, then ask your supervisor to help you with an alternative. He or she might also provide you with a list of essential readings.

4. Use of computer is recommended: As you are doing research in the field of management and business then this point is quite obvious. Use right software: Always use good quality software packages. If you are not capable of judging good software, then you can lose the quality of your paper unknowingly. There are various programs available to help you which you can get through the internet.

5. Use the internet for help: An excellent start for your paper is using Google. It is a wondrous search engine, where you can have your doubts resolved. You may also read some answers for the frequent question of how to write your research paper or find a model research paper. You can download books from the internet. If you have all the required books, place importance on reading, selecting, and analyzing the specified information. Then sketch out your research paper. Use big pictures: You may use encyclopedias like Wikipedia to get pictures with the best resolution. At Global Journals, you should strictly follow here.



6. Bookmarks are useful: When you read any book or magazine, you generally use bookmarks, right? It is a good habit which helps to not lose your continuity. You should always use bookmarks while searching on the internet also, which will make your search easier.

7. Revise what you wrote: When you write anything, always read it, summarize it, and then finalize it.

8. Make every effort: Make every effort to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in the introduction—what is the need for a particular research paper. Polish your work with good writing skills and always give an evaluator what he wants. Make backups: When you are going to do any important thing like making a research paper, you should always have backup copies of it either on your computer or on paper. This protects you from losing any portion of your important data.

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10. Use proper verb tense: Use proper verb tenses in your paper. Use past tense to present those events that have happened. Use present tense to indicate events that are going on. Use future tense to indicate events that will happen in the future. Use of wrong tenses will confuse the evaluator. Avoid sentences that are incomplete.

11. Pick a good study spot: Always try to pick a spot for your research which is quiet. Not every spot is good for studying.

12. Know what you know: Always try to know what you know by making objectives, otherwise you will be confused and unable to achieve your target.

13. Use good grammar: Always use good grammar and words that will have a positive impact on the evaluator; use of good vocabulary does not mean using tough words which the evaluator has to find in a dictionary. Do not fragment sentences. Eliminate one-word sentences. Do not ever use a big word when a smaller one would suffice. Verbs have to be in agreement with their subjects. In a research paper, do not start sentences with conjunctions or finish them with prepositions. When writing formally, it is advisable to never split an infinitive because someone will (wrongly) complain. Avoid clichés like a disease. Always shun irritating alliteration. Use language which is simple and straightforward. Put together a neat summary.

14. Arrangement of information: Each section of the main body should start with an opening sentence, and there should be a changeover at the end of the section. Give only valid and powerful arguments for your topic. You may also maintain your arguments with records.

15. Never start at the last minute: Always allow enough time for research work. Leaving everything to the last minute will degrade your paper and spoil your work.

16. Multitasking in research is not good: Doing several things at the same time is a bad habit in the case of research activity. Research is an area where everything has a particular time slot. Divide your research work into parts, and do a particular part in a particular time slot.

17. Never copy others' work: Never copy others' work and give it your name because if the evaluator has seen it anywhere, you will be in trouble. Take proper rest and food: No matter how many hours you spend on your research activity, if you are not taking care of your health, then all your efforts will have been in vain. For quality research, take proper rest and food.

18. Go to seminars: Attend seminars if the topic is relevant to your research area. Utilize all your resources.

19. Refresh your mind after intervals: Try to give your mind a rest by listening to soft music or sleeping in intervals. This will also improve your memory. Acquire colleagues: Always try to acquire colleagues. No matter how sharp you are, if you acquire colleagues, they can give you ideas which will be helpful to your research.

20. Think technically: Always think technically. If anything happens, search for its reasons, benefits, and demerits. Think and then print: When you go to print your paper, check that tables are not split, headings are not detached from their descriptions, and page sequence is maintained.



21. Adding unnecessary information: Do not add unnecessary information like "I have used MS Excel to draw graphs." Irrelevant and inappropriate material is superfluous. Foreign terminology and phrases are not apropos. One should never take a broad view. Analogy is like feathers on a snake. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Never oversimplify: When adding material to your research paper, never go for oversimplification; this will definitely irritate the evaluator. Be specific. Never use rhythmic redundancies. Contractions shouldn't be used in a research paper. Comparisons are as terrible as clichés. Give up ampersands, abbreviations, and so on. Remove commas that are not necessary. Parenthetical words should be between brackets or commas. Understatement is always the best way to put forward earth-shaking thoughts. Give a detailed literary review.

22. Report concluded results: Use concluded results. From raw data, filter the results, and then conclude your studies based on measurements and observations taken. An appropriate number of decimal places should be used. Parenthetical remarks are prohibited here. Proofread carefully at the final stage. At the end, give an outline to your arguments. Spot perspectives of further study of the subject. Justify your conclusion at the bottom sufficiently, which will probably include examples.

23. Upon conclusion: Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium through which your research is going to be in print for the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects of your research.

INFORMAL GUIDELINES OF RESEARCH PAPER WRITING

Key points to remember:

- Submit all work in its final form.
- Write your paper in the form which is presented in the guidelines using the template.
- Please note the criteria peer reviewers will use for grading the final paper.

Final points:

One purpose of organizing a research paper is to let people interpret your efforts selectively. The journal requires the following sections, submitted in the order listed, with each section starting on a new page:

The introduction: This will be compiled from reference matter and reflect the design processes or outline of basis that directed you to make a study. As you carry out the process of study, the method and process section will be constructed like that. The results segment will show related statistics in nearly sequential order and direct reviewers to similar intellectual paths throughout the data that you gathered to carry out your study.

The discussion section:

This will provide understanding of the data and projections as to the implications of the results. The use of good quality references throughout the paper will give the effort trustworthiness by representing an alertness to prior workings.

Writing a research paper is not an easy job, no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record-keeping are the only means to make straightforward progression.

General style:

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

To make a paper clear: Adhere to recommended page limits.

Mistakes to avoid:

- Insertion of a title at the foot of a page with subsequent text on the next page.
- Separating a table, chart, or figure—confine each to a single page.
- Submitting a manuscript with pages out of sequence.
- In every section of your document, use standard writing style, including articles ("a" and "the").
- Keep paying attention to the topic of the paper.



- Use paragraphs to split each significant point (excluding the abstract).
- Align the primary line of each section.
- Present your points in sound order.
- Use present tense to report well-accepted matters.
- Use past tense to describe specific results.
- Do not use familiar wording; don't address the reviewer directly. Don't use slang or superlatives.
- Avoid use of extra pictures—include only those figures essential to presenting results.

Title page:

Choose a revealing title. It should be short and include the name(s) and address(es) of all authors. It should not have acronyms or abbreviations or exceed two printed lines.

Abstract: This summary should be two hundred words or less. It should clearly and briefly explain the key findings reported in the manuscript and must have precise statistics. It should not have acronyms or abbreviations. It should be logical in itself. Do not cite references at this point.

An abstract is a brief, distinct paragraph summary of finished work or work in development. In a minute or less, a reviewer can be taught the foundation behind the study, common approaches to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Use comprehensive sentences, and do not sacrifice readability for brevity; you can maintain it succinctly by phrasing sentences so that they provide more than a lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study with the subsequent elements in any summary. Try to limit the initial two items to no more than one line each.

Reason for writing the article—theory, overall issue, purpose.

- Fundamental goal.
- To-the-point depiction of the research.
- Consequences, including definite statistics—if the consequences are quantitative in nature, account for this; results of any numerical analysis should be reported. Significant conclusions or questions that emerge from the research.

Approach:

- Single section and succinct.
- An outline of the job done is always written in past tense.
- Concentrate on shortening results—limit background information to a verdict or two.
- Exact spelling, clarity of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else.

Introduction:

The introduction should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable of comprehending and calculating the purpose of your study without having to refer to other works. The basis for the study should be offered. Give the most important references, but avoid making a comprehensive appraisal of the topic. Describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will give no attention to your results. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here.

The following approach can create a valuable beginning:

- Explain the value (significance) of the study.
- Defend the model—why did you employ this particular system or method? What is its compensation? Remark upon its appropriateness from an abstract point of view as well as pointing out sensible reasons for using it.
- Present a justification. State your particular theory(-ies) or aim(s), and describe the logic that led you to choose them.
- Briefly explain the study's tentative purpose and how it meets the declared objectives.



Approach:

Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done. Sort out your thoughts; manufacture one key point for every section. If you make the four points listed above, you will need at least four paragraphs. Present surrounding information only when it is necessary to support a situation. The reviewer does not desire to read everything you know about a topic. Shape the theory specifically—do not take a broad view.

As always, give awareness to spelling, simplicity, and correctness of sentences and phrases.

Procedures (methods and materials):

This part is supposed to be the easiest to carve if you have good skills. A soundly written procedures segment allows a capable scientist to replicate your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order, but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt to give the least amount of information that would permit another capable scientist to replicate your outcome, but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section.

When a technique is used that has been well-described in another section, mention the specific item describing the way, but draw the basic principle while stating the situation. The purpose is to show all particular resources and broad procedures so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step-by-step report of the whole thing you did, nor is a methods section a set of orders.

Materials:

Materials may be reported in part of a section or else they may be recognized along with your measures.

Methods:

- Report the method and not the particulars of each process that engaged the same methodology.
- Describe the method entirely.
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures.
- Simplify—detail how procedures were completed, not how they were performed on a particular day.
- If well-known procedures were used, account for the procedure by name, possibly with a reference, and that's all.

Approach:

It is embarrassing to use vigorous voice when documenting methods without using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result, when writing up the methods, most authors use third person passive voice.

Use standard style in this and every other part of the paper—avoid familiar lists, and use full sentences.

What to keep away from:

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings—save it for the argument.
- Leave out information that is immaterial to a third party.

Results:

The principle of a results segment is to present and demonstrate your conclusion. Create this part as entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Use statistics and tables, if suitable, to present consequences most efficiently.

You must clearly differentiate material which would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matters should not be submitted at all except if requested by the instructor.



Content:

- Sum up your conclusions in text and demonstrate them, if suitable, with figures and tables.
- In the manuscript, explain each of your consequences, and point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation of an exacting study.
- Explain results of control experiments and give remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or manuscript.

What to stay away from:

- Do not discuss or infer your outcome, report surrounding information, or try to explain anything.
- Do not include raw data or intermediate calculations in a research manuscript.
- Do not present similar data more than once.
- A manuscript should complement any figures or tables, not duplicate information.
- Never confuse figures with tables—there is a difference.

Approach:

As always, use past tense when you submit your results, and put the whole thing in a reasonable order.

Put figures and tables, appropriately numbered, in order at the end of the report.

If you desire, you may place your figures and tables properly within the text of your results section.

Figures and tables:

If you put figures and tables at the end of some details, make certain that they are visibly distinguished from any attached appendix materials, such as raw facts. Whatever the position, each table must be titled, numbered one after the other, and include a heading. All figures and tables must be divided from the text.

Discussion:

The discussion is expected to be the trickiest segment to write. A lot of papers submitted to the journal are discarded based on problems with the discussion. There is no rule for how long an argument should be.

Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implications of the study. The purpose here is to offer an understanding of your results and support all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of results should be fully described.

Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact, you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved the prospect, and let it drop at that. Make a decision as to whether each premise is supported or discarded or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."

Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work.

- You may propose future guidelines, such as how an experiment might be personalized to accomplish a new idea.
- Give details of all of your remarks as much as possible, focusing on mechanisms.
- Make a decision as to whether the tentative design sufficiently addressed the theory and whether or not it was correctly restricted. Try to present substitute explanations if they are sensible alternatives.
- One piece of research will not counter an overall question, so maintain the large picture in mind. Where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.



Approach:

When you refer to information, differentiate data generated by your own studies from other available information. Present work done by specific persons (including you) in past tense.

Describe generally acknowledged facts and main beliefs in present tense.

THE ADMINISTRATION RULES

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BY GLOBAL JOURNALS

Please note that following table is only a Grading of "Paper Compilation" and not on "Performed/Stated Research" whose grading solely depends on Individual Assigned Peer Reviewer and Editorial Board Member. These can be available only on request and after decision of Paper. This report will be the property of Global Journals.

Topics	Grades		
	A-B	C-D	E-F
<i>Abstract</i>	Clear and concise with appropriate content, Correct format. 200 words or below	Unclear summary and no specific data, Incorrect form Above 200 words	No specific data with ambiguous information Above 250 words
<i>Introduction</i>	Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited	Unclear and confusing data, appropriate format, grammar and spelling errors with unorganized matter	Out of place depth and content, hazy format
<i>Methods and Procedures</i>	Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads	Difficult to comprehend with embarrassed text, too much explanation but completed	Incorrect and unorganized structure with hazy meaning
<i>Result</i>	Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake	Complete and embarrassed text, difficult to comprehend	Irregular format with wrong facts and figures
<i>Discussion</i>	Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited	Wordy, unclear conclusion, spurious	Conclusion is not cited, unorganized, difficult to comprehend
<i>References</i>	Complete and correct format, well organized	Beside the point, Incomplete	Wrong format and structuring



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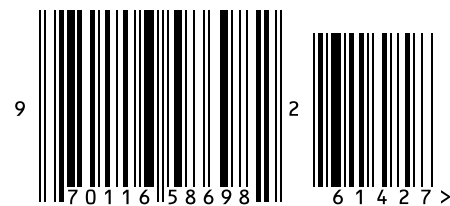
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