

The relationship between market orientation and firm innovativeness: Do gender roles matter? Evidence from food processing firms in Arusha, Tanzania

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ABSTRACT

Food-processing enterprises contribute significantly to the global economy. Yet, many struggle in their growth and face early failure. Innovation, therefore, becomes critical to their survival. This paper investigates how market orientation (MO) influences innovativeness in Tanzanian food-processing firms and tests whether gender roles moderate that relationship. The study is echoed in dynamic capability theory supported by institutional theory. The study employed an explanatory cross-sectional survey design. The simple random sampling technique was used to obtain a sample of 224 food processing firms from the population of 284 registered food processing firms which had updated their business licence in the year 2022/2023. The data were collected using a structured questionnaire which comprised Likert-scale questions. The analysis of the objectives was done by using structural equation modelling (SEM). The findings reveal that all of the MO dimensions had a positive and significant effect on innovativeness. Customer orientation had ($\beta = 0.372$, $p < 0.001$), competitor orientation had ($\beta = 0.404$, $p < 0.001$), and inter-functional coordination had ($\beta = 0.196$, $p = 0.035$). Gender roles moderated customer and competitor orientation links. The findings imply that firms that stay sharply focused on their markets by listening to customers, keeping an eye on competitors and making sure their teams work smoothly together tend to be more innovative. Furthermore, owner/managers should build a routine of gathering customer feedback, track competitor moves, and encourage teamwork. Policy makers offering trainings, networking events and targeted support can help smaller firms develop this market-orientated mindset and spark more innovation across the whole sector.

Keywords: Gender Roles, Food Processing Firms, Innovativeness, Market Orientation, Tanzania

I. INTRODUCTION

For a long time now, innovation is regarded as a driver of firm competitiveness (Zastempowski & Cyfert, 2021), and long-term growth and adoptability depend greatly on how it is managed (Ajer, 2024a). Nonetheless, for a firm to be innovative, its final decision makers need to be innovative (Zawawi *et al.*, 2016). Although they use strategies which differ across sectors, institutional environments, and firm sizes. In an economy where resources are scarce understanding the path to innovation requires conceptual frameworks that capture both internal capabilities and external influences. This is because most of the firm are small- and medium sized (Aragie *et al.*, 2024) and operate in informal or semi-formal settings (Nnko *et al.*, 2024). Among the internal drivers of innovativeness is market orientation (MO) (Hussain *et al.*, 2016; Ho *et al.*, 2018; Alhakimi & Mahmood, 2020; Nege & Kero, 2024). Although, gender roles which are rooted in the institutional and social-cultural settings of society are less explored (Makanwa *et al.*, 2023), they appear to be powerful moderators of this relationship.

The concept of market orientation was first pioneered by Narver & Slater (1990) who described it as a strategic orientation that emphasizes continuous intelligence of gathering information about customers and competitors, internal dissemination of that information, and a responsive organisational culture that adapts to environmental shifts. Market oriented firms as said to be capable of identify unmet needs in the market (Baker & Sinkula, 1999; 2002), anticipate market trends (Alhakimi & Mahmood, 2020) and have a tendency of developing new ideas (Kamarulzaman *et al.* 2023). Such firms have a habit of learning fast, and outward looking culture that facilitates innovation diffusion across organisational functions.

However, market orientation is more critical for food processing firms within the context of low-technology and small-scale enterprises. In recent decades, food processing has emerged as a strategic growth sector in developing economies, offering a vital link between agricultural production and industrial development (Gurria, 2020 and Ndhlovu, & Hapompwe, 2024). Globally, food processing accounts for about 60% of all value addition in agricultural produce,

serving as a major driver of employment, rural development, and economic diversification (World Bank, 2020). These firms often lack formal research and development infrastructure and thus heavily rely on market signals as a proxy for innovativeness (Ajer *et al.*, 2024a). As such, MO does not just support innovation processes in these firms but also it gives alternatives for formal mechanism of discovery and experimentation. For example, the firm's ability to differentiate uneven customers need and note the movements of competitors makes the firm more innovative by improving its product features, packaging, distribution methods or pricing models (Ajer *et al.*, 2024b). Such actions may appear to be normal but are very vital for a dynamic and uncertain environments (Kamarulzaman *et al.*, 2023).

This paper addresses a critical gap by examining food processing firms in Tanzania which is economically significant, yet an under researched sector. While most innovation studies focus on high-tech or industrialized countries (Alsos *et al.*, 2013, Arun & Joseph 2021), this research highlights how innovation emerges from market learning and social adaptation in semi-formal enterprises. It also contributes new evidence on how gender roles influence strategic decision-making, offering a contextualized understanding of gender beyond binary classification. The paper further makes a methodological contribution by modelling market orientation as a secondary-order construct using Structural Equation modelling (SEM). It also develops a distinctive multi-dimensional measure of gender roles, offering a more accurate representation of gender roles, and donating a more accurate representation of gendered dynamics in firm behaviour. This approach enhances the validity of structural models in low-income settings.

1.1 Statement of the Problem

In Tanzanian economy, food processing sector make up about 39% of all registered small and medium-sized enterprises (SMEs) which contributes around 8% of Gross Domestic Product (GDP) and 7.1% of national employment base (URT, 2022). These firms are crucial for value addition in agricultural sector and are central to national industrialization goals (NBS, 2020; UN, 2020). Accordingly, Tanzania's Third Five-Year Development Plan (FYDP III) (2021/22–2025/26) has listed food processing an important machinery for promoting inclusive economic revolution, job creation, and food security (URT, 2021). Likewise, the SME Development Policy of Tanzania identifies food processing as an important tool for encouraging technological advancement, and entrepreneurial culture, (URT, 2003).

However, despite the economic benefits food processing firms in Tanzania, these firms still face numerous challenges such as poor growth, stiff competition, low levels of innovation, and pre-mature death (Kweka & Sooi, 2020). These limitations are confirmed by short product life cycles, weak market linkages, and intense competition from imported goods. For example, only around 20% of firms manage to defend their market share sustainably (World Bank, 2020), emphasizing the barriers that hinders growth and adaptability. For firm to survive and performance well in such a volatile and resource shortage environment, innovativeness inevitable (Mwenda *et al.*, 2023; Xiao *et al.*, 2023). Innovativeness refers to the capacity to adopt and implement novel ideas, products, processes, or business models (OECD, 2018). Yet, empirical knowledge on what enables or inhibits innovativeness in the food processing sub-sector remain underexplored, especially in the context of developing economies.

1.2 Research Objectives

- i. To determine how strongly market orientation shapes the innovation capacity of Tanzanian food-processing firms, and
- ii. To examine the ways in which gender roles alter or fail to alter the link between market orientation and innovativeness in food-processing firms.

1.3 Research Hypothesis

H_{o1} : Market orientation is positively associated with innovativeness of food processing firms in Tanzania.

H_{o2} : Gender roles moderate the relationship between customer orientation and firm innovativeness, such that the relationship is stronger when the gender role constraints are lower.

H_{o3} : Gender roles moderate the relationship between competitor orientation and firm innovativeness, such that the relationship is stronger when the gender role constraints are lower.

H_{o4} : Gender roles moderate the relationship between inter-functional coordination and firm innovativeness, such that the relationship is stronger when the gender role constraints are lower.

II. LITERATURE REVIEW

2.1 Theoretical Review

Dynamic Capabilities Theory (DCT) is used in this study as a conceptual lens for understanding innovativeness. DCT posits that firms gain competitive advantage not by just owning resources and best practices that explain competitive advantage, but by how the resources and competences are combined and mobilized through the ability to sense opportunities, seize them, and reconfigure them accordingly in a changing environment (Teece *et al.*, 1997). In this view, market orientation (MO) is defined as a firm's strategic commitment potential for helping the firm to generate,

disseminate, and respond to market opportunities which enabling firms to generate competitive advantage in terms of customer preferences, monitor competitive threats, and adjust strategies accordingly (Narver & Slater, 1990; Teece *et al.*, 1997; Teece, 2014; & Teece, 2018). Numerous studies have confirmed the role of MO in enhancing firm innovativeness (Nege & Kero, 2024; Kamarulzama *et al.*, 2023). However, this relationship remains underexplored in low-tech and low-resource sectors such as food processing sub-sector in Tanzania.

Moreover, while DCT focuses on firm-level capabilities, it often overlooks the broader institutional environment which surround the firms. Thus, Institutional Theory offers a complementary perspective by emphasizing how firm behaviour is shaped by social norms, regulatory pressures, and cultural expectations (DiMaggio & Powell, 2012). The Institutional Theory underscores the role of regulatory frameworks, social conventions, and cultural-cognitive norms which shape organisational behaviour (North, 1990; Bruton & Ahlstrom, 2003; Scott, 2004). There are practical drawback in Tanzania, such as limited infrastructure, bureaucratic delays, and gender-based social expectations which to a great extent influence how firms devise and enact market-oriented strategies (Mroso *et al.*, 2024). These contextual factors are not neutral but rather they are facilitated by power relations, access to resources, and entrenched societal roles.

By integrating the Dynamic Capabilities Theory and the Institutional Theory, this paper proposes that, while market orientation equips firms with the adaptive capabilities needed for innovation, the gendered social structures as moderators explain the effectiveness of these capabilities. This theoretical framework creates an understanding of how firms operating in environments with structural constrains can navigate to innovativeness. Furthermore, this approach aligns this study with the Tanzania FYDP III which emphasizes on gender mainstreaming and inclusive growth, and the SME Development Policy of Tanzania which calls for targeted support to women-owned enterprises and innovation-driven SMEs (URT, 2021; URT, 2003).

2.2 Empirical Review

This section focuses on synthesis of empirical literature relevant to this paper. The organisation of ideas is based on two sections which are relationship between market orientation and innovativeness then gender roles as moderators of market orientation-innovativeness relationship.

2.2.1 The Relationship between Market Orientation and Innovativeness

The role of market orientation as a dynamic capability is in line with the views of Dynamic Capability Theory (DCT). MO, in this situation, is not simply a marketing technique but a firm-level capability that enhances adaptability in turbulent environments. This is relevant to Tanzania in the food processing sub-sector where firms operate in hypercompetitive, low-margin markets with insufficient supportive infrastructure and limited access to capital. In such conditions, the flexibility that comes with market orientation can be a game-changer, helping even small firms outperform their competitors by driving innovation (Ho *et al.*, 2018; Kamarulzaman *et al.*, 2023, Hurley & Hult 1998; Mirzaei *et al.*, 2016).

Mo has consistently been associated with higher levels of innovativeness across industries in innovation literature, (Nege & Kero, 2024; Slater & Narver, 1994). Whereas the determinants such as customer orientation allows firms to detect emerging needs (Jalilvand, 2017; Kiani *et al.*, 2019); competitor orientation promotes attentiveness over industry trends (Aydin, 2021; Boateng *et al.*, 2023; and Guleş *et al.*, 2015); and inter-functional coordination facilitates internal synergy necessary for innovation (Nuvriasari *et al.*, 2022; Aydin, 2021; Gatignon, & Xuereb, 2006). However, while the relationship between market orientation and innovativeness remain positive, its effectiveness is shaped by the institutional context in which the firm operates. This is where the Institutional Theory becomes appropriate in this study. The institutions which in this case are the food processing firms are made up of regulative, normative, and cultural-cognitive elements that structure their social behaviour (DiMaggio & Powell, 2012). Since these firms are not isolated economic units, they are surrounded by a network of rules, norms and belief systems that influence their strategies and performance. The institutional environment for the SMEs in Tanzania includes not just legal and regulatory frameworks but also deep-rooted social norms, particularly those which are related to gender (Mrosso *et al.*, 2024; Kaburire & Masoka, 2024).

Meanwhile as the relationship between MO and innovativeness does not occur in a social vacuum, the emerging research suggests that gender roles may significantly shape how owners/managers in the firms perceive and respond to market demands (Scott, 2004; Graafland & Smid, 2017). In majority of sub-Saharan African settings, gender roles influence access to finance, mobility, control over productive assets, time availability, and authority in decision-making all of which are appropriate for market engagement and innovativeness (Kaburire, & Msoka, 2024).

Gender roles are institutional dimensions which is often overlooked in strategic management studies. While gender has been widely studied as a demographic variable (e.g., percentage of women in top management), there is growing recognition that gender roles which are indicated by social responsibilities, decision-making power, and access to productive resources more shape entrepreneurial behaviour (DiMaggio & Powell, 2012; DiMaggio, 1998). In many parts of Tanzanian societies women entrepreneurs face constrictions from traditional roles in caregiving, limited control

over assets, and marginalization from formal financial systems. Such structural inequalities influence how entrepreneurs sense market needs, act upon customer information, and engage in innovative activity (Scott, 2004; Graafland & Smid, 2017). Hence, this paper adopted gender roles to explore how gender norms and resource access interact with strategic capabilities such as MO to shape firm innovativeness.

2.2.2 Gender Roles as Moderator of Market Orientation-Innovativeness Relationship

The gender roles in this study are treated as complex social structures that assign different responsibilities, rights, and opportunities to men and women. They manifest in various ways such as women entrepreneurs may bear a disproportionate share of household duties, have limited access to formal financial credits and productive resources, and face cultural expectations that constrain their business decisions (Minyangu *et al.*, 2021; Obisesan & Olayide, 2021). This has caught the attention of the researcher because women in Tanzania make up a growing proportion of SMEs owners for about 43% of all entrepreneurs (Tundui & Tundui, 2020), which aligns with aspirations of the SME Development Policy of 2003 and Tanzania's FYDP III. Yet, their ability to execute strategic functions such as responding to market demand or initiating innovation often remains restricted by structural inequalities (Tundui & Tundui, 2020).

Regrettably, the influence of gender roles on innovativeness is minimal in the literature. According to Minyangu *et al.* (2021) & Obisesan & Olayide (2021) studies that incorporate gender tend to focus on the percentage of men and women in management or in ownership or in the board of directors, without examining further the social and institutional structures that influence strategic behaviour. Therefore Escamilla-Solano *et al.*, (2022) calls for a study that focus on the relational approach to gender which sees gender as a dynamic role not just a fixed attribute. Such a study should look at the social interactions, cultural norms, and institutional pressures (Kompa & Witkowska, 2018; Blanco-Gonzalez *et al.*, 2020). This shift opens up an opportunity for this study to examination of how gender roles might moderate the relationship between internal capabilities like market orientation and firm-level outcomes such as innovativeness.

Moreover, the gendered differences in decision-making authority, time availability, and access to networks and capital are likely to influence how market insights are gathered, interpreted, and translated into innovative activities (Blanco-Gonzalez *et al.*, 2020). In this regard, a male entrepreneur with decision-making autonomy and minimal domestic responsibilities may act swiftly on market intelligence, whereas a woman entrepreneur constrained by social expectations and resource limitations, may be slower or less capable to act swiftly even when they are equally market-oriented. From an institutional perspective, these gendered differences constitute part of the decision-making units that shape organisational behaviour (Escamilla-Solano *et al.*, 2022). Thus, the same level of market orientation may lead to different innovation outcomes, depending on the institutional logics involved such as gender roles.

This study further points out theoretical contribution by advancing the Dynamic Capability Theory which demonstrates how market orientation operates as an adaptive capability in resource-constrained, and low-technology firms (Hermawati, 2020). This text further enriches this perspective by integrating the Institutional Theory, emphasizing how gender roles moderate the relationship between market orientation and innovativeness. This dual-theoretical framing provides a more holistic understanding of how firm capabilities are enacted within a deep-rooted institutional context. Thus, it is theorized that gender roles moderate the relationship between the three core components of market orientation and firm innovativeness.

2.3 Conceptual Model

Using PLS-SEM, this paper examined how the three dimensions of market orientation the competitor orientation, customer orientation, and inter-functional coordination how they shape innovativeness of food-processing firms located in Arusha City and Arusha District, Tanzania. Firm age and firm size were included as control variables, while gender was tested as a moderator affecting the links between the market-orientation constructs and firm innovativeness. The relationships hypothesised in this paper are depicted in Figure 1.

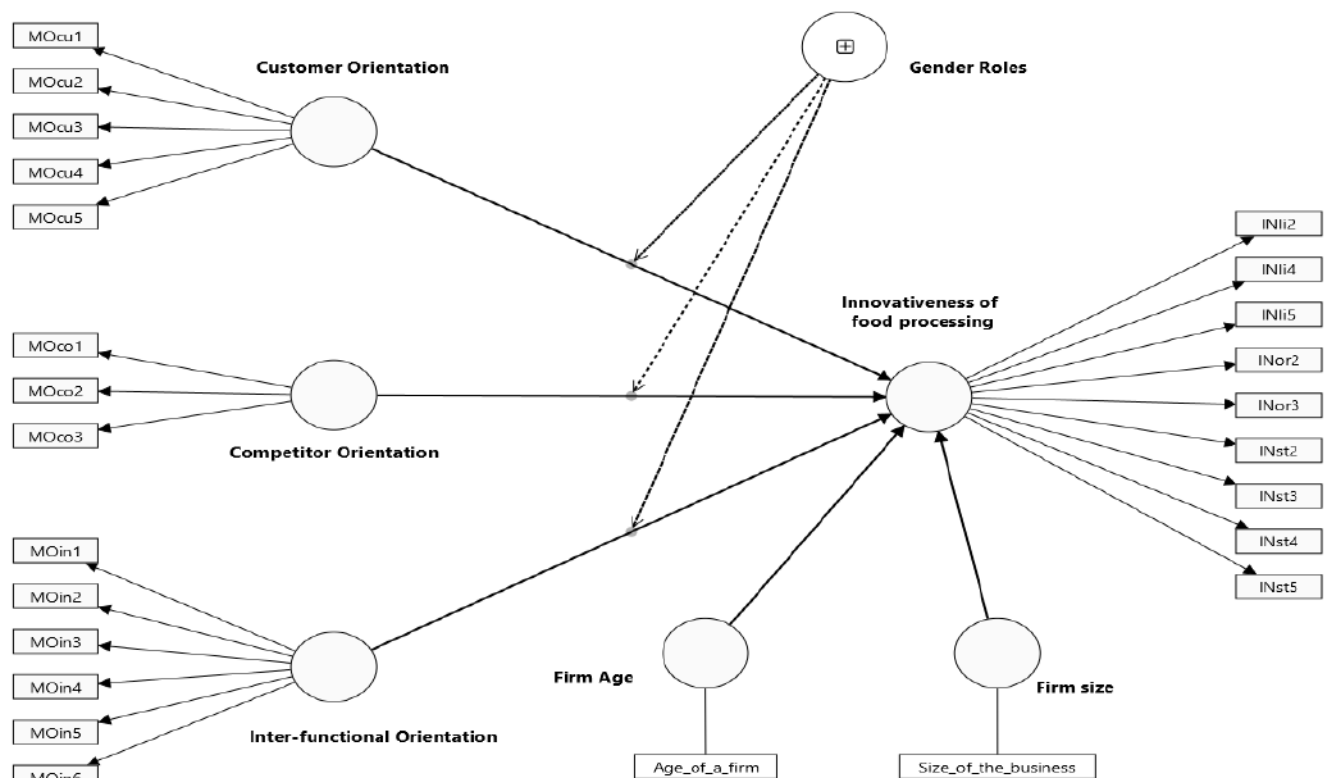


Figure 1
Conceptual Framework Guiding PLS-SEM

III. METHODOLOGY

The study on which this paper is based adopted the post-positivism research philosophy, which supports objective investigation and hypothesis testing, based on empirical data. Given the aim of examining measurable effects of market orientation and innovativeness then testing the moderation effect of gender role, a deductive, quantitative approach was appropriate. This approach enabled the researcher to test the theoretical propositions derived from the Dynamic Capabilities Theory by using a structured a questionnaire and statistical models.

Furthermore, an explanatory cross-sectional survey design was employed to assess the relationships among market orientation, innovativeness and gender roles among food processing firms. Data were collected form food processing firms operating in Arusha District Council and Arusha City Council in North-Eastern Tanzania. This region was purposively selected because it homes numerous food-processing enterprises and it has socio-cultural diversity of the Meru and Maasai communities which provide a contextually rich analysis of gender roles in business.

The target population for the study included owners/managers of formally registered food processing firms. These individuals were selected due to their strategic role played in shaping firm strategy, resource allocation and making innovation decisions at the firm level. The food processing subsector was selected because of an increasing shift in customers’ preferences, changing life styles and availability of substitute products. This sector, at larger, was designated as a national development priority, given its potential to contribute significantly to industrialization and economic transformation (URT, 2022). From a sample frame of 284 firms, a sample of 224 respondents was selected using the hypergeometric formula (Jung, 2014) that is suitable for small populations and allows for statistically sound estimation with a minimum sampling error.

Data were gathered through a structured, closed-ended questionnaire whose items were adapted from well-validated scales and fine-tuned for the Tanzanian setting. Market orientation (MO) was operationalised with Narver and Slater’s (1990) tripartite framework which comprise of customer orientation, competitor orientation, and inter-functional coordination. Fifteen Likert-type statements (five per dimension) were taken from Chikerema and Makanyeza (2021) and Alhakimi and Mahmoud (2020), both of which provide context-appropriate measures for emerging-market environments.

Firm innovativeness was assessed with items drawn from Gamal *et al.* (2011) and Moreira *et al.* (2024), covering five facets which are strategy, process, linkage, organisation, and learning, and cross-checked against the conceptualisations by Calik *et al.* (2017), Tidd and Bessant (2018), and Tidd *et al.* (2005) to ensure comprehensive

coverage. Gender roles were modelled as a moderating construct that captures socio-institutional constraints on resource access, household responsibilities, and decision-making power as conceptualized in the gender analysis framework by March *et al.* (1999) and Ellis *et al.* (2020). The variables in this study were measured on a five-point Likert scale from 1 to 5 points, in which the responses to the items on the scale ranked from Strongly disagree, Disagree, Undecided, Agree and Strongly agree.

After the development of the instrument, pilot testing of the questionnaire was conducted. The pre-testing with 30 firms was done to ensure clarity, cultural relevance and internal consistency. The feedback led to some minor corrections on language and layout. The final instrument was reviewed by academic experts and demonstrated high reliability and validity in the main study.

The data were analysed using Smart PLS4 software whereby partial least squares structural equation modelling (PLS-SEM) were analysed. The software is well suited for complex models, modest sample sizes, and moderation testing (Hair *et al.*, 2020). The procedure unfolded in two steps; the first step was measurement-model evaluation, which was done by a reliability test whereby Cronbach's alpha and composite reliability were tested. Convergent validity was verified by computing the average variance extracted (AVE). The second step was discriminant validity analysis which was checked using the Fornell–Larcker criterion and the Heterotrait–Monotrait (HTMT) ratios. Structural-model testing was done by estimating direct paths from each market-orientation dimension to innovativeness. The moderating influence of gender roles was examined through both interaction terms and multi-group analysis (MGA). Firm age and firm size served as control variables. Statistical significance and 95 % confidence intervals were obtained with 5 000 bootstrap resamples.

IV. FINDINGS & DISCUSSION

4.1 Measurement Model

Model quality was evaluated at two levels: construct reliability and validity, and discriminant validity as follows.

4.1.1 Construct Reliability and Validity

The reliability and validity of the measurement model was evaluated through assessment of various components such as composite reliability, outer loadings, Cronbach's alpha, average variance extracted (AVE), and discriminant validity (Sarstedt *et al.*, 2017). According to Table 1 all outer loadings exceed the recommended threshold of 0.70, with values ranging from 0.716 to 0.921 confirming strong indicator reliability (Hair *et al.*, 2022). The Cronbach's alpha coefficients range from 0.883 to 0.953, all being above the minimum acceptable level of 0.70. Similarly, composite reliability values (ρ_c) range from 0.916 to 0.958, well above the recommended threshold of 0.70.

All constructs achieved an Average Variance Extracted (AVE) scores above the 0.50 benchmark, ranging from 0.573 to 0.811. This shows that every latent construct accounts for over half of the variance in its indicators, validating that the constructs are effectively represented by their relevant measurement items (Sarstedt *et al.*, 2017). The Inner Variance Inflation Factor (VIF) readings stay under the cautious limit of 3.3, with the peak value at 1.514, suggesting that multicollinearity issues among the constructs are not a concern. The results align with recognized standards for validating measurement models (Ismail *et al.*, 2022), confirming that the constructs accurately assess their designated variables.

Table 1

The Measurement Model Assessment of Indicators

Indicators	Outer loadings	Cronbach's alpha	Composite reliability (ρ_a)	Composite reliability (ρ_c)	Average variance extracted (AVE)	Inner VIF
MOco1	0.892	0.883	0.884	0.928	0.811	1.153
MOco2	0.921					
MOco3	0.888					
MOcu1	0.861	0.902	0.907	0.927	0.719	1.238
MOcu2	0.844					
MOcu3	0.890					
MOcu4	0.798					
MOcu5	0.843					
GSst2	0.733	0.953	0.954	0.958	0.573	1.343
GSst3	0.771					
GSst4	0.761					
GSst5	0.768					
GSst6	0.728					
GSst7	0.785					



Indicators	Outer loadings	Cronbach's alpha	Composite reliability (rho a)	Composite reliability (rho c)	Average variance extracted (AVE)	Inner VIF
GSst8	0.716					
GSst9	0.724					
GSst10	0.756					
GSst11	0.732					
GSst12	0.765					
GSst13	0.778					
GSst14	0.788					
GSst16	0.719					
GSst17	0.802					
GSst18	0.756					
GSst19	0.777					
INli2	0.818	0.919	0.921	0.933	0.607	
INli4	0.817					
INli5	0.742					
INor2	0.785					
INor3	0.732					
INst2	0.803					
INst3	0.747					
INst4	0.738					
INst5	0.822					
MOin1	0.746					
MOin2	0.739					
MOin3	0.879					
MOin4	0.841					
MOin5	0.798					
MOin6	0.808					
Gender Roles x Competitor Orientation	1.000	1.000	1.000	1.000	1.000	1.213
Gender Roles x Customer Orientation	1.000	1.000	1.000	1.000	1.000	1.262
Gender Roles x Inter-functional Coordination	1.000	1.000	1.000	1.000	1.000	1.249
Age of a firm	1.000	1.000	1.000	1.000	1.000	1.514
Size of the business	1.000	1.000	1.000	1.000	1.000	1.476

4.1.2 Discriminant Validity

Discriminant validity was examined with two complementary tests: the Fornell–Larcker criterion and the Heterotrait–Monotrait (HTMT) ratio. The Fornell-Larcker criterion results in Table 2 provide strong evidence of discriminant validity across all constructs. The square root of AVE values on the diagonal consistently exceeds the inter-construct correlations in their respective rows and columns, confirming that each construct shares more variance with its own indicators than with other constructs. For instance, Innovativeness of food processing demonstrates a square root of AVE of 0.779, which substantially exceeds its correlations with other constructs such as Customer Orientation (0.567) and Competitor Orientation (0.542), establishing clear conceptual distinctiveness.

The correlation matrix reveals meaningful relationships between constructs while maintaining discriminant validity. The strongest correlation exists between Innovativeness of food processing and Customer Orientation (0.567), followed by Competitor Orientation (0.542), suggesting that market orientation dimensions are important predictors of innovation capability. Notably, firm characteristics show more modest correlations, with Firm Age demonstrating a moderate relationship with Innovativeness (0.309), while Firm Size shows a weaker association (0.111), indicating that organizational demographics may have differential impacts on innovation outcomes (Hair et al., 2020).



Table 2
Discriminant Validity under Fornell-Larcker Criterion

Indicator	Competitor Orientation	Customer Orientation	Gender Roles	Innovativeness of food processing	Inter-functional Coordination	Firm Age	Firm size
Competitor Orientation	0.901						
Customer Orientation	0.261	0.848					
Gender Roles	0.220	0.298	0.757				
Innovativeness of_ food processing	0.542	0.567	0.506	0.779			
Inter-functional Coordination	0.255	0.324	0.359	0.547	0.803		
Firm Age	0.151	0.016	0.276	0.309	0.063	1.000	
Firm size	-0.010	-0.119	0.182	0.111	-0.036	0.531	1.000

The numbers in bold letters are the AVE of the correlating constructs

The HTMT (Heterotrait-Monotrait) ratio assessment in Table 3 provides additional confirmation of discriminant validity, with all values falling well below the stringent 0.90 threshold recommended by Hair et al. (2020). The highest HTMT value observed is 0.619 between Innovativeness of food processing and Customer Orientation, which remains comfortably within acceptable limits. This conservative approach to discriminant validity assessment strengthens confidence in the measurement model's ability to distinguish between theoretical constructs. The HTMT results reveal that while constructs are appropriately distinct, meaningful theoretical relationships exist between key variables. The relatively higher HTMT values between market orientation constructs (Competitor Orientation, Customer Orientation, Inter-functional Coordination) and Innovativeness suggest conceptually logical associations without compromising discriminant validity. The lower HTMT values involving firm demographic variables (Age and Size) indicate the control variables maintain appropriate independence from the primary theoretical constructs, supporting their inclusion as distinct explanatory factors in the structural model.

Table 3
Discriminant Validity under HTMT

Relationship	Heterotrait-monotrait ratio (HTMT)
Customer Orientation <-> Competitor Orientation	0.291
Firm Age <-> Competitor Orientation	0.161
Firm Age <-> Customer Orientation	0.046
Firm size <-> Competitor Orientation	0.022
Firm size <-> Customer Orientation	0.127
Firm size <-> Firm Age	0.531
Gender Roles <-> Competitor Orientation	0.238
Gender Roles <-> Customer Orientation	0.318
Gender Roles <-> Firm Age	0.282
Gender Roles <-> Firm size	0.187
Innovativeness of_ food processing <-> Competitor Orientation	0.599
Innovativeness of_ food processing <-> Customer Orientation	0.619
Innovativeness of_ food processing <-> Firm Age	0.321
Innovativeness of_ food processing <-> Firm size	0.127
Innovativeness of_ food processing <-> Gender Roles	0.537
Inter-functional Coordination <-> Competitor Orientation	0.287
Inter-functional Coordination <-> Customer Orientation	0.356
Inter-functional Coordination <-> Firm Age	0.066
Inter-functional Coordination <-> Firm size	0.052
Inter-functional Coordination <-> Gender Roles	0.386
Inter-functional Coordination <-> Innovativeness of_ food processing	0.603

Note: values should be below 0.90 (Hair et al., 2022)

4.2 Structural Model Evaluation

The structural model analysis revealed significant relationships between several market orientation factors and innovativeness of food processing firms, as outlined in Table 4. The results indicate that Competitor Orientation had a significant and positive impact on innovativeness, with a coefficient of ($\beta = 0.304$, $p < 0.001$), demonstrating that firms oriented toward understanding and responding to competitor activities were more likely to innovate. Similarly, Customer Orientation was also positively associated with innovativeness, with a coefficient of ($\beta = 0.342$, $p < 0.001$), emphasizing the importance of responding to customer needs and preferences. Both constructs emerged as critical drivers of innovation.

In contrast, the control variables, Firm Age ($\beta = 0.190$, $p < 0.001$) suggesting that experience that comes with age might play a role in innovativeness and Firm Size ($\beta = 0.051$, $p = 0.259$) did not show significant relationships with innovativeness, suggesting that structural attributes of firms, such as their size, might not play a central role in driving innovation. Similarly, although gender roles showed a positive direct relationship with innovativeness ($\beta = 0.166$, $p = 0.001$), the effect was not statistically significant, indicating that gender alone does not much influence innovation outcomes in food processing firms.

The construct Inter-functional Coordination, which measured the extent of collaboration and information sharing across firm departments, had a significant positive impact on innovativeness, with a coefficient of ($\beta = 0.289$, $p < 0.001$). This result underscores the importance of fostering internal collaboration to enhance innovation capacity. However, moderation effects involving gender roles yield significant results on the interaction between gender and Customer Orientation ($\beta = 0.120$, $p = 0.006$), Competitor Orientation ($\beta = 0.132$, $p = 0.001$), suggesting that while gender roles is an important contextual factor of innovativeness, it also significantly alter the relationships between market orientation constructs and innovativeness. Furthermore, a clear description of the model results is shown in Figure 2.

Table 4
Structural Model Estimation for Hypothesis Testing

Pathways	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Competitor Orientation -> Innovativeness of_ food processing	0.304	0.306	0.040	7.549	0.000 ***
Customer Orientation -> Innovativeness of_ food processing	0.342	0.341	0.042	8.207	0.000***
Firm Age -> Innovativeness of_ food processing	0.190	0.191	0.046	4.115	0.000 ***
Firm size -> Innovativeness of_ food processing	0.051	0.049	0.045	1.130	0.259
Gender Roles -> Innovativeness of_ food processing	0.166	0.168	0.050	3.312	0.001**
Gender Roles x Competitor Orientation -> Innovativeness of_ food processing	0.132	0.130	0.042	3.183	0.001**
Gender Roles x Customer Orientation -> Innovativeness of_ food processing	0.120	0.118	0.044	2.758	0.006*
Gender Roles x Inter-functional Coordination -> Innovativeness of_ food processing	-0.035	-0.034	0.045	0.792	0.428
Inter-functional Coordination -> Innovativeness of_ food processing	0.289	0.288	0.046	6.228	0.000 ***

* Indicates significance of indicators at the 0.05 level of significance

** Indicates significance of indicators at the 0.01 level of significance

*** Indicates significance of indicators at the 0.001 level of significance

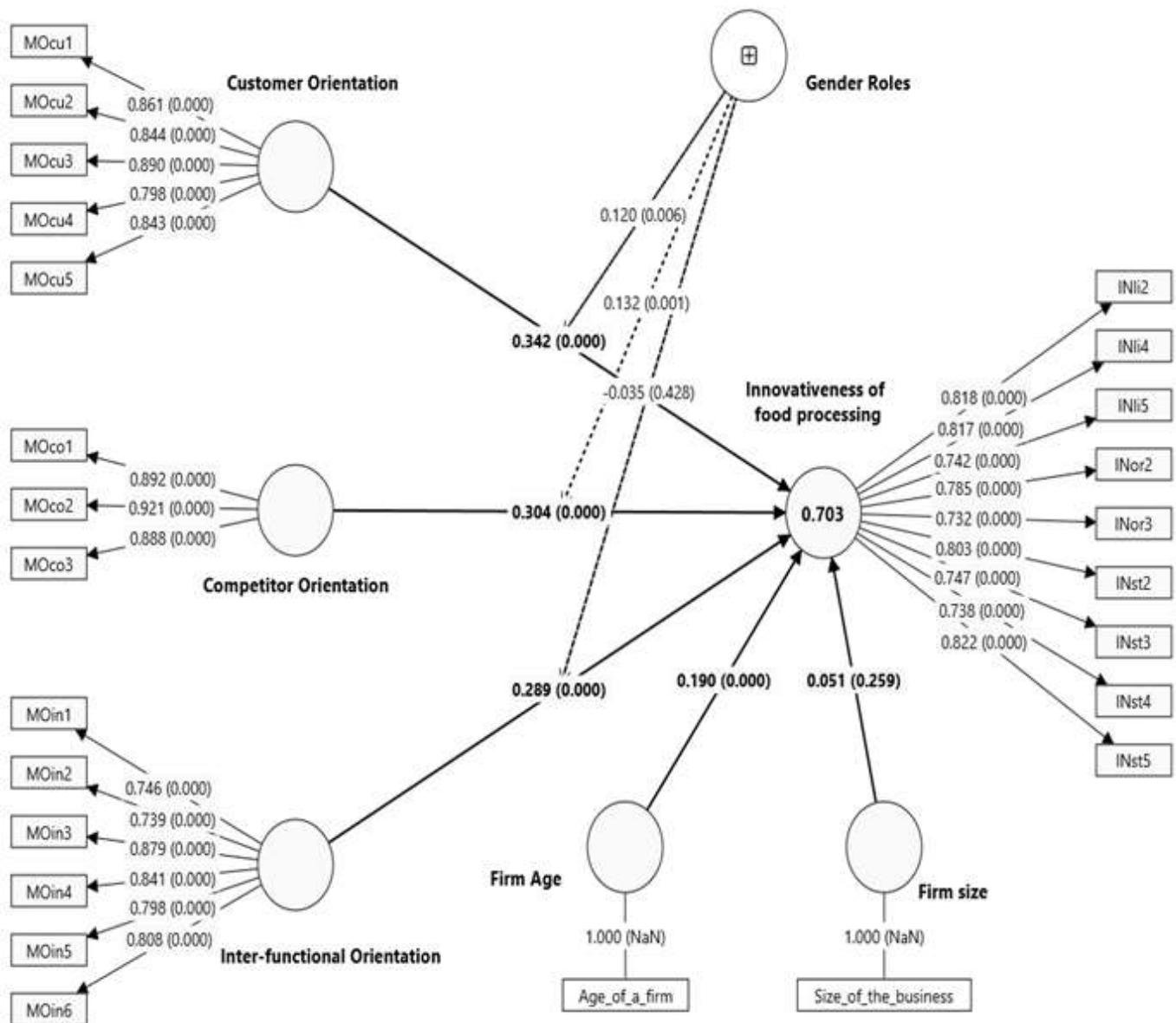


Figure 2
Bootstrap Model with Estimation

4.3 Discussion

The findings of this paper confirm that market orientation has a positive and significant relationship with innovativeness in food processing firms. This strengthens the theoretical proposition that firms that are more responsive to market dynamics tend to be more innovative. These results concur with Narver and Slater (1990), in their foundational work, emphasized that customer and competitor orientation are essential for generating value through innovation. Similarly, Baker and Sinkula (2002) argue that a learning-oriented market approach strengthens a firm’s adaptive capability, thereby enhancing innovativeness. More recent empirical studies by Schulze *et al.* (2022) Karaev and Mercan (2023) validated these findings by demonstrating that strong market orientation influences not only product innovation but also strategic and process innovations in competitive sectors. Kaushik and Dangwal (2023) specifically highlighted the role of inter-functional coordination in driving internal innovation processes, a finding echoed by this paper. Chikerema and Makanyeza (2021) also support this view by showing how different aspects of market orientation contribute to innovation capacity, particularly through strengthening external linkages with suppliers and customers. Specifically, the results based on the model’s three latent variables were as follows.

First, Customer Orientation ($\beta = 0.342$, $p < 0.001$) demonstrating that organizations which prioritizes customer needs, preferences, and feedback are more likely to develop innovative products. This imply that understanding

consumer demands serves as a primary catalyst for innovation in the food processing sector. These results concur with the findings obtained by Alhakimi and Mahmoud (2020), Jalilvand (2017) and Ho *et al.* (2018) who also found that customer orientation significantly influenced innovativeness. On the other hand, these findings contradict the findings by Guleş *et al.* (2015) who concluded that customer orientation had insignificant relationship with innovativeness. Moreover, gender roles moderate this relationship. This is shows that a gendered balanced organisation is capable of keeping customers at the heart of business and keep pushing the firms to perform better to be able to satisfy them and retain them. Orientation towards customers inspires business to form linkages with other stakeholders to earn economies of scale, learn and collaborate with them to improve performance. Additionally, firms organize their activities in such a way that customers' interests are easily attended to as quickly as possible. A proper organisation of the business environment and personnel improves work efficiency and quality of products. Also, a firm which is focused on the customers is well equipped with strategies which enable it to meet customers' expectations, access resources, and optimize the use of available resources (Kaushik & Dangwal, 2023). All these make a firm innovative in a structurally gendered institution where gender roles of the owner/manager may interfere decision making towards satisfying the requirements of the customers. The findings of this paper imply that owners/managers of food processing firms in Arusha, Tanzania, are highly focused on customers as the heart of their business regardless of the gender roles constraints that they encounter. This makes firms demonstrate innovative practices such as forming linkages, having reliable flow of information within their organisations and working towards attaining strategies which have been collaboratively set for the firm. It is a practice that has enabled the firms to secure and retain customers.

Secondly, Competitor Orientation ($\beta = 0.304$, $p < 0.001$), indicate that firms which are actively monitoring competitive activities, and responding purposefully to competitive threats are more innovative. This imply that in dynamic environment like that of food processing sector, competitive pressures drive continuous improvement and innovation. The significance obtained in this relationship suggests that competitive intelligence serves as both defensive mechanism and offensive strategy for innovation development. These results are in line with the findings by Martinez-Azua *et al.*, (2025), Ho *et al.* (2018), Kamarulzaman *et al.* (2023) and Aydin (2021), who also found competitor orientation to be significantly impacting innovativeness. In contrast, these results contradict the findings by Alhakimi and Mahmoud (2020) and Nuvriasari *et al.* (2022) who stated that competitor orientation does not significantly influence innovativeness. Gender roles significantly moderated this relationship. The results were obtained because competitors are alarm clocks of manufacturing firms regardless of the gendered constraints that interferes their operations. A firm which focuses on what its competitors do, how they do it and resources they use are frequently improved which is a good thing to the health of the firm as the firm becomes always up-to-date when it comes to technology, designs and products in the market which sharpen their competitive edge. As a result, such firms form collaborations with stakeholders from whom they can synergize and enjoy economies of scale, improve their organisations structures and flow of information to ensure they are sharp in reacting to information, quick in decision making and highly flexible to changes.

Additionally, a competitor focused firm becomes highly strategic in planning for the next move so as to attain a positive impact in the market. All these are innovative behaviours which can make any firm successful (Schulze *et al.*, 2022). As it was found in this paper, such practices are not interfered by the gender roles of the owner/manager of the firm because the competitor is a push factor from the external environment which is the market. These findings mean that food processing firms in Arusha, Tanzania, are innovative as they focus on competitors that make them up-to-date and encourage them to form collaborations, communicate properly and be strategic in their actions which give them competitive advantages. A food processing firm which is competitor focused is innovative regardless of the gender of the owner/manager of the firm.

Finally, Inter-functional Coordination ($\beta = 0.289$, $p < 0.001$) describes the important role of internal coordination and cross-functional collaboration towards innovativeness. This finding implies that to be innovative, food processing firms needs to ensure integrations across various departments. The strength of this relationship indicates that breaking down organizational bureaucracy and fostering collaborative cultures are fundamentals actions for sustained innovation in the complex food processing environment. This finding is similar to the findings obtained by Nuvriasari *et al.* (2022), Aydin (2021), and Gatignon and Xuereb (2006) who concluded that inter-functional coordination plays a key role in enhancing innovativeness in businesses. A firm uses information of their customers and competitors to be able to differentiate what they offer to the market and for positioning purposes. The results of this paper are similar to those of other scholars because inter-functional coordination has ability to enhance superior firm performance as it facilitates communication with customers, suppliers and team members hence creating a sustainable competitive advantage (Baker & Sinkula, 1999; 2002). Contrary to that, the findings of this paper differ from those obtained by Alhakimi & Mahmoud (2020), Guleş *et al.* (2015), and Kaunda *et al.* (2023) which showed that inter-functional coordination had an insignificant impact on innovativeness. This shows that firms which master the skills of team work and sharing information have a resource that cannot easily be imitated; this enables them to portray innovative behaviours such as forming linkage with various actors in the industry, be highly organised in terms of systems and structures, and strategically formulate their plans and goals in a collaborative manner.

The moderation effects reveal sophisticated interactions between gender roles and market orientation dimensions that provide deeper insights into organizational dynamics. Gender roles significantly amplify the positive relationships between both Competitor Orientation and innovativeness ($\beta = 0.132$, $p = 0.001$) and Customer Orientation and innovativeness ($\beta = 0.120$, $p = 0.006$). These moderation effects suggest that organizational contexts characterized by more progressive or flexible gender role perceptions create environments where external market orientation activities become more effective at generating innovation outcomes. This may occur because various views, gender balanced decision-making processes, and reduced gender roles constraints enables organizations to interpret market signals and translate competitive and customer information into innovative solutions.

Thus, it is of no objections that owners/managers of the food processing firms have to be attentive to the needs and changes in the market and collaborate in fulfilling them to maintain their competitive position in the market. Therefore, this comparative discussion sheds light on the strength of market orientation as a strategic capability for innovation without forgetting the importance of cross-contextualisation in that nexus.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The findings revealed a strong and statistically significant positive relationship between market orientation and innovativeness. All the three dimensions of market orientation had a significant positive effect on the conforming innovativeness dimensions, emphasizing the importance of market driven capabilities in enhancing firm innovativeness. However, the gender roles moderated two of the dimensions which are consumer and competitor orientation implying that organisation culture and decision making may be shaped by gender roles; which significantly strengthened the path of market orientation towards innovativeness in the context of this paper.

The findings drop lessons that, firms that stay sharply focused on their markets by listening to customers, keeping an eye on competitors and making sure their team work smoothly together tend to be more innovative. Firms quickly spot new ideas and turn them in to better products, services or processes by paying close attention to what customers want, watching what rivals are doing and sharing such information across departments. These habits make it easier to adjust when market change and help businesses to keep a competitive edge.

Furthermore owner/managers should build a routine of gathering customer feedback, track competitor moves, and encourage teamwork. Policy makers to offer trainings, networking events and targeted support can help smaller firms develop this market-oriented mindset and spark more innovation across the whole sector. Thus, this paper confirms that market orientation is a serious dynamic capability for promoting innovation in Tanzania's food processing firms; emphasising access to emerging markets is of critical theoretical and practical importance.

5.2 Recommendations

From the findings and the above conclusions, firm owner/managers and policymakers in the food processing sector should incorporate market orientation in the strategic plans so as to improve innovation performance and enhance long-term competitiveness. The study further recommends firms to combine regular customer- and competitor-intelligence habits, to form cross-functional boards with gender-balanced membership, and make at least 10 % allocation of their budget for innovation purposes to strengthen innovation in resource-constrained firms. Also, they should consider flexible work schedules and subsidised childcare to relieve gender-linked time burdens.

Policymakers, especially those in the context of Tanzania's FYDP III and SME Development policy, should include market-oriented capabilities in small and medium-sized enterprises (SMEs) in driving comprehensive industrial transformation. Additionally, policymakers should develop a system that allow provision of incentives to demonstrable gender inclusions, expand low-collateral credit windows for women-owned firms, and conduct trainings which address unspoken favouritisms.

Future research should apply longitudinal designs to track gender-role dynamics. Another study could either be among sectors of varying technological intensity as a comparative study, or a mixed methods approach to unpack micro-level mechanisms and performance implications fully.

REFERENCES

- Ajer, B., Ngare, L. and Macharia, I. (2024a). Drivers of innovation in the agro-food micro, small and medium enterprises of Uganda, *Journal of Agribusiness in Developing and Emerging Economies*, 14(5),979-996. <https://doi.org/10.1108/JADEE-09-2022-0206>.
- Ajer, B., Ngare, L. and Macharia, I. (2024b). The influence of market orientation on innovation attitude and firm innovativeness: A case of agri-food MSMEs in Uganda, *Journal of Agribusiness in Developing and Emerging Economies*, 14(5), 1218-1232. <https://doi.org/10.1108/JADEE-11-2022-0250>.

- Alhakimi W. & Mahmoud M. (2020). The impact of market orientation on innovativeness: evidence from Yemeni SMEs. *Asia Pacific Journal of Innovation and Entrepreneurship*, 14(1), 47-59. <https://doi.org/10.1108/APJIE-08-2019-0060>
- Alsos, G.A., Ljunggren, E. & Hytti, U. (2013). Gender and innovation: state of the art and a research agenda. *International Journal of Gender and Entrepreneurship*, 5(3), 236-256.
- Aragie, E. A., Benfica, R., Pauw, K., Randriamamonjy, J., & Thurlow, J. (2024). Assessing investment priorities for inclusive agricultural transformation in Tanzania. *Development Policy Review*, 42(6), e12812.
- Arun, T. M., & Joseph, R. P. (2021). Gender and firm innovation: A systematic literature review and future research agenda. *International Journal of Entrepreneurial Behavior & Research*, 27(2), 301–333. <https://doi.org/10.1108/IJEBR-08-2019-0480>
- Aydin, H. (2021). Market orientation and product innovation: The mediating role of technological capability. *European Journal of Innovation Management*, 24(4), 1233-1267.
- Baker, W. E., & Sinkula, J. M. (1999). The synergistic effect of market orientation and learning orientation on organizational performance. *Journal of the Academy of Marketing Science*, 27(4), 411–427. <https://doi.org/10.1177/0092070399274002>.
- Baker, W. E., & Sinkula, J. M. (2002). Market orientation, learning orientation and product innovation: Delving into the organization's black box. *Journal of Market-Focused Management*, 5(1), 5–23. <https://doi.org/10.1023/a:1012543911149>.
- Bruton G. D., & Ahlstrom D. (2003). An institutional view of China's venture capital industry: Explaining the differences between China and the West. *Journal of Business Venturing*, 18 (2), 233-260
- Calik, E., Calisir, F., & Cetingue, B. (2017). A Scale Development for Innovation Capability Measurement. *Journal of Advanced Management Science* 5(2), 69-76.
- Chikerema L., & Makanyeza C. (2021). Enhancing the performance of micro-enterprises through market orientation: Evidence from Harare, Zimbabwe. *Global Business and Organizational Excellence*. 40, 6–19. <https://doi.org/10.1002/joe.22075>
- DiMaggio, P.J. (1998). The new institutionalisms: avenues of collaboration. *Journal of Institutional and Theoretical Economics*, 154(4), 696-705
- DiMaggio, P.J. and Powell, W.W. (Eds) (2012), *The New Institutionalism in Organizational Analysis*, University of Chicago press.
- Ellis, A. E., Meade, N. G., & Brown, L. S. (2020). Evidence-based relationship variables when working with affectional and gender minority clients: A systematic review. *Practice Innovations*, 5(3), 202.
- Escamilla-Solano, S., Paule-Vianez, J., & Blanco-González, A. (2022). Disclosure of gender policies: do they affect business performance? *Heliyon*, 8(1), 1-8. <https://doi.org/10.1016/j.heliyon.2022.e08791> ,
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), 39-50.
- Gamal D., Salah T., & Elrayyes N. (2011). *How to Measure Organisation Innovativeness? An Overview of Innovation Measurement Frameworks and Innovation Audit/Management Tool*. Technology Innovation and Entrepreneurship Centre. 35 pp.
- Gatignon, H. and Xuereb, J.-M. (2006), “Strategic orientation of the firm and new product performance”, *Journal of Marketing Research*, 34(1), 77-90.
- Graafland, J. and Smid, H. (2017). Reconsidering the relevance of social license pressure and government regulation for environmental performance of European SMEs. *Journal of Cleaner Production*, 141, 967-977. <https://doi.org/10.1016/j.jclepro.2016.09.171>
- Guleş, H. K., Zerenler, M., Cagliyan, V., Sener, T., & Karaboga, K. (2015). The effect of market orientation and innovation ability on enterprise performance: a practice of structural equation modelling analysis: Research on SMEs. *European Scientific Journal (Special Edition)*: 31-42.
- Gurria, A. (2020). *SMEs are key for more inclusive growth*. Paris: OECD Publishing.
- Hair, J. F., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research*, 109, 101–110. <https://doi.org/10.1016/j.jbusres.2019.11.069>.
- Hair, J.F., Hult, G.T.M., Ringle, C. and Sarstedt, M. (2022). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, 3rd ed., SAGE Publications, Thousand Oaks, CA.
- Hermawati, A. (2020). The implementation of dynamic capabilities for SMEs in creating innovation. *Journal of Workplace Learning*. 32(3), 199–216. <https://doi.org/10.1108/JWL-06-2019-0077>.
- Ho K.L.P., Nguyenb C.H.N., Adhikaria R., Milesc M.P., Bonney L. (2018) Exploring market orientation, innovation, and financial performance in agricultural value chains in emerging economies. *Journal of Innovativin Knowledge* 3(3), 153–163. <https://doi.org/10.1016/j.jik.2017.03.008>
- Hurley R., Hult G. (1998). Innovation, market orientation, and organizational learning: an integration and empirical examination. *Journal of Marketing*, 62, 42–54. <https://doi.org/10.2307/125174>

- Hussain, J., Shah, F. A., & Khan, M. A. (2016). Does organizational learning matter? Investigating the impact of learning orientation on SMEs performance. *Sarhad Journal of Management Sciences* 2(2): 128–138. <https://doi.org/10.31529/sjms.2016.2.2.3>
- Ismail, A. R., Makhtar, N. K., Md Zein, R., Mat Noor, M., Hamid, H., Che Hassan, N. H., Mohamad, D., & Khamis, N. K. (2022). The effect of thermal towards human perception of Malaysian construction workers through structural equation modelling (SEM). In M. H. A. Hassan et al. (Eds.), *Human-centered technology for a better tomorrow* (Lecture Notes in Mechanical Engineering. Springer. https://doi.org/10.1007/978-981-16-4115-2_57
- Jalilvand, M.R. (2017). The effect of innovativeness and customer-oriented systems on performance in the hotel industry of Iran. *Journal of Science and Technology Policy Management*, 8(1), 43-61. <https://doi.org/10.1108/JSTPM-08-2016-0018>
- Jung, S. H. (2014). Stratified Fisher's exact test and its sample size calculation. *Biometrical journal*, 56(1), 129-140.
- Kaburire, L., & Msoka, E. M. (2024). Gendered Differential Barriers Facing Male and Female Handcraft Entrepreneurs in Tanzania: A Comparative Analysis. *Journal of Research Innovation and Implications in Education*, 8(4), 93-108.
- Kamarulzaman N., Khairuddin N.H., Hussin S.R. (2023). Measuring market orientation, innovative marketing strategies and performance: evidence from the Malaysian agro-food manufacturers. *Journal of agribusiness Development in Emerging Economies* 13(2), 211–228. <https://doi.org/10.1108/jadee-06-2021-0148>.
- Karaev, F., & Mercan, M. (2023). Exploring the impact of market orientation and innovation on firm performance in the beverage industry: the mediating role of innovation. *Eurasian Journal of Economic and Business Studies*, 67(1), 139-155.
- Kaunda, K., Thuo, K. J., & Kwendo, E. (2023). Interactive communication and marketing performance of micro and small enterprises within Nyanza Region, Kenya. *African Journal of Empirical Research*, 4(1), 199–206. <https://doi.org/10.51867/ajernet4.1.17>
- Kaushik, N., & Dangwal, R. C. (2023). Do entrepreneurial orientation and market orientation matter for MSMEs performance? A systematic literature review. *Paradigm*, 27(1), 78-92.
- Kiani, M., Mustafa, S. and Ahmad, M. (2019), Does innovation capabilities affect the new service innovation success among Pakistani cellular companies? *Asia Pacific Journal of Innovation and Entrepreneurship*, 13(1), 2-16.
- Kompa, K., & Witkowska, D. (2018). Factors affecting men's and women's earnings in Poland. *Economic research-Ekonomska istraživanja*, 31(1), 252-269.
- Kweka, J., & Sooi, F. (2020). Partnerships for inclusive growth: Can linkages with large firms spur the growth of SMEs in Tanzania. *Dar es Salaam: Uongozi Institute*.
- March, C., Smyth, I. A., & Mukhopadhyay, M. (1999). *A guide to gender-analysis frameworks*. Oxfam.
- Martínez-Azúa, B.C., Dias, Á., & Sama-Berrocal, C. (2025). The key role of market orientation in innovation ambidexterity in agribusiness firms. *Review of Management Science*, 19, 39–65. <https://doi.org/10.1007/s11846-024-00732-6>
- Minyangu, M. P., Nguetzet, P. M. D., Masirika, S. A., Adeniyi, A., Olayide, O. E., & Kaghoma, C. K. (2021). Understanding gender-based differences in the engagement of the youth in agribusiness in South-Kivu province, Democratic Republic of Congo. *Business Strategy & Development*, 4(1), 11-21.
- Mirzaei O, Micheels ET, Boecher A (2016) Product and marketing innovation in farm-based businesses: the role of entrepreneurial orientation and market orientation. *Int Food Agribusiness Management Review*, 19(2), 99–129.
- Moreira, A., Navaia, E., & Ribau, C. (2024). Innovation capabilities and their dimensions: A systematic literature review. *International Journal of Innovation Studies*, 8(3), 313-333.
- Mrosso, R. M., Genda, E. L., & Tutuba, N. B. (2024). Effect of Process Innovation on the Performance of Women-owned Food Processing Micro and Small Enterprises in Tanzania. *East African Journal of Management and Business Studies*, 4(2), 64-73.
- Mwenda, B., Israel, B., & Mahuwi, L. (2023). The influence of sustainable supply chain management practices on financial sustainability of food processing SMEs. *Journal of Management & Research*, 21(2), 218-235. <https://doi.org/10.1108/LBSJMR-01-2023-0003>
- Narver, J.C. and Slater, S.F. (1990). The effect of a market orientation on business profitability. *Journal of Marketing*, 54, 20-35.
- NBS, (2020). *Quarter three gross domestic report*. Tanzania Government Press, Dar es Salaam.
- Ndhlovu, G. & Hapompwe, C. C. (2024). Exploring the Application of Entrepreneurial Innovation in Selected Food Processing (Dairy) and Manufacturing Firms in Lusaka, *Journal of Economics, Finance and Management Studies* 7(2), 1210-1226. <https://doi.org/10.47191/jefms/v7-i2-40>.
- Nege T. B. & Kero C. A. (2024). Competitive Strategy Orientation and Market Orientation for Product Innovative Success in Ethiopian SMEs. *Science Journal of Business and Management*, 12(3), 47-63. <https://doi.org/10.11648/j.sjbm.20241203.11>

- Nnko, E., Ismail, I. J., & John, E. (2024). Learning orientation and response of micro and small food agro-processing enterprises to the customers' needs in Tanzania. *Cogent Business & Management*, *11*(1), 2334058.
- North, D. C. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge University Press.
- Nuvriasari A., Suyanto M., and Azman M.N.A. (2022). The Effect of Market Orientation towards Small and Medium Enterprises Batik Entrepreneurial Marketing: A Case Study in Indonesia. *General Management*, *23*(188), 110-118. <https://doi.org/10.47750/QAS/23.188.16>
- Obisesan, O. O., & Olayide, O. E. (2021). Asymmetric information, business environment, and transactions costs among business owners in Nigeria: implications for female entrepreneurial sustainability transitions. *Business Strategy & Development*, *4*(1), 34-40.
- OECD, Eurostat. Oslo Manual (2018). Guidelines for Collecting, Reporting and Using Data on Innovation. 4th Edition. Paris/Eurostat, Luxembourg: The Measurement of Scientific, *Technological and Innovation Activities*, OECD Publishing.
- Sarstedt, M., Ringle, C. M., & Hair, J. F. (2017). Partial Least Squares Structural Equation Modelling. In Handbook of Market Research 1–40. *Springer International Publishing*. https://doi.org/10.1007/978-3-319-05542-8_15-1.
- Schulze, A., Townsend, J. D., & Talay, M. B. (2022). Completing the market orientation matrix: The impact of proactive competitor orientation on innovation and firm performance. *Industrial Marketing Management*, *103*, 198–214. <https://doi.org/10.5167/uzh-221832>.
- Scott, W. R. (2004). Institutional theory. *Encyclopedia of Social Theory*, *11*, 408–14.
- Slater, S. F., & Narver, J. C. (1994). Does competitive environment moderate the market orientation-performance relationship? *Journal of Marketing*, *58*(1), 46-55. <https://doi.org/10.2307/1252250>.
- Teece, D.J. (2014). The Foundations of Enterprise Performance: Dynamic and Ordinary Capabilities in an (Economic) Theory of Firms. *Academy of Management Perspectives*, *28* (4), 328–52.
- Teece, D.J. (2018). Business Models and Dynamic Capabilities. *Long Range Planning*, *51*(1), 40–9.
- Teece, D.J., Gary P., and Amy S. (1997). Dynamic Capabilities and Strategic Management. *Strategic Management Journal*, *18*(7), 509–33.
- Tidd, J., & Bessant, J. (2018). *Managing Innovation: Integrating Technological, Market and Organizational Change*. 6 editions. Wiley.
- Tidd, J., Bessant, J., & Pavitt, K. (2005). *Managing Innovation: Integrating Technological, Market and Organizational Change*. 3rd edition. John Wiley & Sons, Ltd. 582 pp.
- Tundui, C. S. and Tundui, H. P. (2020). Performance drivers of women-owned microcredit funded enterprises in Tanzania. *International Journal of Gender and Entrepreneurship*, *12*(2), 211-230
- UN (2020). *Tanzanian industrial SMEs cluster mapping report*, Climate Technology centre and network. Nairobi.
- URT (2021): *National Five-Year Development Plan 2021/22-2025/26*. Dodoma, United Republic of Tanzania: Ministry of Finance and Planning.
- URT, (2003) *Small and Medium Enterprise - Development Policy*. Ministry of Industry and Trade.
- URT. (2022). *National Baseline Survey Report on Micro, small and medium enterprises in Tanzania*. Ministry of Industry and Trade (MIT)
- World Bank, (2020). *Small and medium enterprises (SMEs): Finance improving SMEs' access to finance and finding innovative solutions to unlock sources of capital*, World Bank and Oxford University Press.
- Xiao, H., Mamun, A. A., Masukujaman, M., & Yang, Q. (2023). Modelling the significance of strategic orientation on green innovation: mediation of green dynamic capabilities. *Humanities and Social Sciences Communications*, *10*, 777 <https://doi.org/10.1057/s41599-023-02308-3>.
- Zastempowski, M. & Cyfert, S. (2021). Impact of entrepreneur's gender on innovation activities. The perspective of small businesses. *PLoS ONE* *16*(10), e0258661. <https://doi.org/10.1371/journal.pone.0258661>.
- Zawawi N.F.M., Wahab S.A., Al-Mamun A., Yaacob A.A.S., Samy N.K.A & Fazal S.A (2016). Defining the Concept of Innovation and Firm Innovativeness: A Critical Analysis from Resource-Based View Perspective. *International Journal of Business and Management*, *11*(6), 1-87.