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# Asymmetric Effects of Migration on Economic Growth in Tunisia

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## ABSTRACT:

Tunisia has long been characterized as a net emigration country, recording a persistently negative migration balance averaging approximately 18,646 individuals per year over the 2001–2023 period, a structural feature that reflects deep-seated labor market imbalances, limited domestic employment opportunities, and recurrent political and economic instability since the 2011 revolution. This demographic reality raises a fundamental macroeconomic question: can the potential economic gains associated with improved migration inflows—through immigration or return migration truly compensate for the structural losses induced by the systematic departure of skilled workers, commonly referred to as "brain drain"? This question is far from trivial, as migration flows are known to influence growth through multiple, often competing channels, including remittance inflows, human capital depletion, labor market adjustments, and shifts in domestic consumption and investment patterns. Conventional economic literature has largely addressed this question through linear modelling frameworks, implicitly assuming that positive and negative migration shocks affect GDP in a symmetric and proportional manner an assumption this study explicitly challenges on both theoretical and empirical grounds.

Building on this critique, this paper investigates the asymmetric effects of net migration on economic growth in Tunisia over the period 2001–2023, a timeframe that captures significant political transitions, economic reforms, and evolving migration dynamics. The central research question examines whether positive and negative shocks to the migration balance exert differential and potentially non-equivalent impacts on Gross Domestic Product (GDP), and whether standard linear models are adequate to capture these dynamics or whether they risk masking important nonlinearities inherent to the migration-growth relationship. By adopting a nonlinear analytical framework, this study aims to provide a more nuanced understanding of how migration shocks propagate through the Tunisian economy, thereby contributing to the broader debate on the macroeconomic consequences of emigration in developing and transition economies.

**Keywords**— migration, NARDL, GDP, economic growth

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# A Multi-Criteria Finance-Driven Scoring Model to Rank Green SMEs and Startups for Investor Decision-Making

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## ABSTRACT

Environmental, social, and governance (ESG) considerations have become central to assessing corporate sustainability, yet their financial implications remain unclear for small and medium-sized enterprises (SMEs), which face growing pressure to adopt responsible practices despite limited resources. In this context, the study addresses the following research question: How can the green SME sustainability assessment literature be synthesized to develop a suitable finance-driven framework for scoring and assessing green SMEs and startups? Using Research Rabbit, 395 records were identified through keyword and citation-network searches, from which 34 papers published between 2013 and 2025 were selected for in-depth analysis, informed by the PRISMA-ScR framework. The selected studies were classified by firm type, methodology, and financial and ESG variables, revealing 23 methodological approaches. The findings show that large-firm studies rely mainly on quantitative methods and standardized disclosures, while SME-focused research is more limited, diverse, and dependent on surveys, qualitative methods, ESG indices, and hybrid models. Accordingly, this study proposes a Fuzzy DEMATEL + TOPSIS framework to assess and rank green SMEs and startups under data uncertainty. Nevertheless, our findings remain dependent on the quality and methodological rigor of the original studies selected. Differences in ESG definitions, indicators, and reporting practices may also lead to inconsistencies across studies and reduce comparability of results. In addition, future research could examine the applicability of the proposed framework across different geographical and economic environments, since ESG studies are concentrated in Europe and Asia, which limits the representation of Middle Eastern contexts.

**Keywords—** Small and Medium-Sized Enterprises, Corporate Sustainability, Sustainable Finance, ESG Reporting, Fuzzy DEMATEL, TOPSIS

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# Reverse Logistics and Firm Performance in Tunisia: An Empirical Study

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## ABSTRACT

Green logistics and reverse logistics are crucial strategies for organizations to balance economic growth with sustainability, aiming for value recovery, product lifecycle management, and waste reduction. However, empirical research on their impact on firm performance remains limited. To address this literature gap, this study investigates the following central research question: What is the impact of reverse logistics management practices on the environmental, economic, and social performance of firms operating within an emerging market context like Tunisia? This study employs a quantitative research design, gathering primary data from Tunisian businesses using an online survey and utilizing IBM SPSS Statistics to examine the connection between reverse logistics adoption and performance metrics. The empirical results demonstrate that the effective use of reverse logistics management strategies is positively and significantly connected with organizational outcomes. It first greatly enhances environmental performance through waste reduction and resource optimization. It also improves operating cost efficiency by using fewer raw materials and recovering value from returns. Third, it significantly enhances customer-related outcomes by improving brand reputation, customer satisfaction, and company image through ethical business practices. These results validate the strategic utility of reverse logistics in an emerging market setting, adding new empirical data to the literature on supply chain management. However, previous research has mostly concentrated on wealthy economies. The analysis emphasizes that the shift to circular models is a strategic motivator rather than just a regulatory burden. This study concludes that reverse logistics is essential for green logistics, effectively linking environmental responsibility with economic performance. Managers should strategically invest in reverse flows to enhance long-term competitiveness.

**Keywords—** Green Logistics, Reverse Logistics, Firm Performance, Emerging Economy, Tunisia.

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# Communication through Events: An Attempt at Conceptual Clarification

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## ABSTRACT

Nowadays, communication through events has become more than ever an essential component of non-media communication within companies' marketing mix. This form of communication offers a unique opportunity to create a lasting impact on the target audience. It transcends traditional advertising methods by directly engaging consumers in a tangible brand experience.

A company makes events with the aim of promoting a brand, a product or a service, to make a lasting impression and convey a specific message to a selected audience (Rapeaud, 2016). An event is more than simply a collection of various elements (date, service providers, participants, technical and logistical resources, etc.) which basically do not constitute a genuine communication strategy.

Communication through events is "live" advertising, a "living" representation of the company's message and values. It is a strategic action aimed at achieving specific objectives and generating a significant return on investment, particularly in terms of communication (Rapeaud, 2016; Pascal, 2017).

Despite the strategic position attributed to communication through events, the concept suffers from a lack of definition, leading to ambiguity and a relative loss of meaning. Due to its lack of precision, communication through events has not reached a consensus among researchers (Boistel, 2005). Indeed, it is difficult to establish a unified understanding of this concept, as each definition may encompass different realities, actions, and objectives for the company.

From this perspective, the present article aims to provide a literature review of communication through events. To this end, we will successively examine the history of communication through events, its definition, its key characteristics, the process of integrating events into the company's communication policy, as well as its tools and objectives.

**Keywords—** Communication, event, communication through events, sponsorship, patronage, marketing mix.

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# Toward an Integrative Model of E-Satisfaction and E-Loyalty in Moroccan E-Ticketing: A Conceptual PLS-SEM Approach

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## ABSTRACT

The digital transformation of services is redefining access to cultural, sporting and event services. In Morocco, this evolution is accelerated by a busy events calendar, notably thanks to the recent Africa Cup of Nations 2025 and the prospect of co-hosting the 2030 World Cup, as well as by the constant growth of online purchases, whose share has increased from 15.1% in 2019 to 24.9% in 2024.

In this context, e-ticketing platforms are becoming strategic digital intermediaries for event-based SMEs and small platform operators, linking online purchasing with offline service delivery. Their specificity lies in a hybrid nature: value is fully realized only when the ticket is validated and physical access to the event is granted, which amplifies perceived risk and makes operational reliability central. Despite this growth and the emergence of national ticketing platforms, e-ticketing remains under-studied as a distinct object in management science. This paper aims to develop a parsimonious integrative model explaining the perceptual determinants of e-satisfaction and behavioral loyalty among Moroccan e-ticketing users.

The study is conceptual and adopts a positivist, hypothetico-deductive approach. Rather than accumulating adoption frameworks, it integrates the most relevant contributions of four complementary theories: Expectation-Confirmation Theory, e-SERVQUAL combined with the IS Success Model, Trust Theory, and selected dimensions of the Technology Acceptance Model. The proposed model links seven antecedents—service quality, information quality, system quality, perceived usefulness, perceived ease of use, confirmation of expectations and electronic trust—to e-satisfaction, which is expected to mediate their effects on behavioral loyalty, while perceived security acts as an antecedent of trust. A future empirical phase will rely on a questionnaire survey of Moroccan e-ticketing users, with reflective scales adapted from validated instruments, and on PLS-SEM analysis under SmartPLS 4 to assess both the measurement model (composite reliability, AVE, discriminant validity) and the structural model (path coefficients, R<sup>2</sup>, mediation and predictive relevance).

The expected findings suggest that e-satisfaction results from a combination of functional, informational, technical, cognitive and relational factors, and that reliable ticket validation is a decisive, sector-specific quality component. Trust is expected to influence loyalty both directly and indirectly through satisfaction, confirming its dual role in reducing transactional uncertainty. Theoretically, the paper contributes to digital marketing and SME research by offering a contextualized, sector-specific framework for understanding customer retention in e-ticketing, thereby moving beyond a generic reading of e-commerce. Managerially, it provides event-based SMEs and platform operators with actionable levers to improve system reliability, information clarity, interface simplicity, payment security, trust building and, ultimately, customer loyalty. The framework also opens avenues for future research, including empirical testing across different event types and the introduction of moderators such as age, online-payment familiarity and initial trust.

**Keywords—** e-ticketing; e-satisfaction; behavioral loyalty; e-trust; SMEs; PLS-SEM, Morocco.

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# Digital Transformation of the Human Resources Function and Resistance to Change in Moroccan SMEs: A Conceptual Model and Methodological Framework Proposal

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## ABSTRACT

The digital transformation of the human resources function (e-HRM) has become a strategic lever of competitiveness for SMEs, which constitute more than 90% of the Moroccan productive fabric. Yet e-HRM projects frequently fail, less for technical than human reasons: resistance to change among employees remains the main failure factor identified by the literature, and frameworks adapted to SMEs in emerging economies, particularly Morocco, remain scarce.

This paper addresses the following research question: what are the determinants of resistance to change during the digital transformation of the HR function in Moroccan SMEs, and how can managerial levers mitigate it? It develops an integrative model grounded in Lewin's force field theory, the multidimensional view of resistance to change, and the UTAUT model of technology acceptance applied to e-HRM, linking individual determinants (job insecurity, digital skills gaps) and organizational determinants (managerial communication, change support) to resistance to change and to acceptance of digital HR tools, with trust in management as a mediator. Four testable hypotheses are formulated.

Methodologically, a positivist, hypothetico-deductive quantitative design is specified: a questionnaire survey administered to employees, HR managers and owner-managers of Moroccan SMEs, using five-point Likert scales adapted from validated instruments, tested through partial least squares structural equation modeling (PLS-SEM) with bootstrap-based mediation analysis.

Expected contributions are threefold: an integrative model bridging resistance and acceptance; a contextualization of change management theories to SMEs of an emerging economy; and adapted measurement instruments. Managerial contributions include low-cost levers for SME managers — early communication, digital upskilling, and early user involvement. The absence of immediate empirical validation is acknowledged as the main limitation, with empirical results to be presented in a forthcoming article.

**Keywords—** Digital transformation; e-HRM; resistance to change; SMEs; change management; conceptual model; Morocco.

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# The effect of board characteristics on risk management: Toward an integrated model

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## ABSTRACT

The intensification of various risks has made effective risk management a strategic priority for companies. The board of directors (BOD) plays a key role in defining risk appetite and overseeing risk management mechanisms. However, research still insufficiently examines directors' demographic, cognitive, and professional characteristics and their combined impact on risk management effectiveness. This research thus aims to answer the following question: To what extent do the structural, demographic, and cognitive characteristics of the BOD contribute to improving the effectiveness of corporate risk management? To answer this question, we employ an integrative theoretical framework combining agency theory, and resource dependence theory. The empirical analysis focuses on an international sample of 234 companies from 14 countries, observed over the period 2015-2025. The financial, governance, and risk management data were extracted from the Refinitiv database. Linear regression models on panel data were estimated to examine the joint effect of six board characteristics: its size, the duality of the roles of CEO and chairman, gender diversity, the independence of directors, their academic background, and their professional experience. The results indicate that the composition of the BOD is a significant determinant of the effectiveness of risk management. More specifically, companies with boards that bring together diverse structural, demographic, and cognitive resources exhibit more effective risk management mechanisms. These results suggest that the effectiveness of the board does not depend solely on its formal independence or size, but also on the complementarity of the knowledge, experiences, perspectives, and monitoring capabilities of its members. This study extends the traditional view of the board beyond its monitoring role. It highlights directors as controllers, strategic resource providers, and cognitive actors influencing risk management. By jointly examining six board dimensions internationally, it helps explain inconsistencies in prior research. Our results emphasize the necessity for companies and regulatory bodies to go beyond formal compliance criteria when composing BOD. The selection of directors should seek a balance between independence, diversity, expertise and experience. This approach can enhance the board's ability to anticipate threats, challenge managerial decisions, and build more resilient risk management systems.

**Keywords—** Corporate governance, board characteristics, board diversity, risk management, panel data

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# The Role of Business Intelligence in Improving Decision-Making Performance: Insights from Tangier-Based Companies

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## ABSTRACT

Recent advances in Business Intelligence (BI) and Artificial Intelligence (AI) have significantly improved access to relevant data, thereby facilitating more effective decision-making. Decision-making performance relies on the use of managerial tools capable of ensuring both the accuracy and timeliness of decisions. However, despite the increasing adoption of Business Intelligence tools, the extent to which BI-assisted management control improves decision-making performance, particularly in terms of decision-making speed and accuracy, remains insufficiently explored in the Moroccan context. This research is grounded in two theoretical frameworks. First, Decision Theory (March & Simon, 1958) argues that the availability of advanced information systems supports decision-makers throughout the decision-making process. Second, the Information Theory developed by Shannon and Weaver (1949) suggests that an information system is considered effective when it generates high value-added information, thereby improving decision-making performance. Building on these theoretical foundations, the study develops a conceptual model to examine how Business Intelligence contributes to decision-making performance through improvements in decision-making speed and accuracy.

This study adopts a quantitative research approach to test the proposed hypotheses and examine the relationships among the study variables. Data were collected through a structured questionnaire administered via Google Forms to a targeted sample of 100 companies located in the city of Tangier, Morocco. The study variables were measured using five-point Likert scales adapted from previous literature. Based on the data collected, the analysis provides preliminary evidence regarding the contribution of BI to decision-making accuracy and speed. Preliminary findings show a high level of BI adoption, with 100% of respondents familiar with or using BI solutions. BI is mainly associated with improved data processing and information access (67.7%), while its use for cost and performance automation remains limited (16.1%).

BI also appears to improve decision-making accuracy and speed. Most respondents report better decision quality (83.9%), more accurate information use (74.2%), fewer errors (71.0%), and faster access to relevant information (80.6%). Overall, 67.7% perceive BI as improving the decision-making process.

These preliminary results suggest that BI contributes to more accurate and timely managerial decisions. However, the findings remain subject to revision as data collection and validation are ongoing

**Keywords— Business intelligence; Management control; Decision-making performance; Speed decision-making; Accuracy decision-making**

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# Artificial intelligence as a key antecedent of Online Brand Advocacy (OBA): a conceptual framework applied to SMEs.

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## ABSTRACT

Online Brand Advocacy (OBA) can be defined as the range of post-consumption behaviors, whereby consumers spontaneously promote a brand on digital platforms, by sharing positive recommendations that may influence the decisions of other consumers. It is an advanced form of consumer engagement, where they become true brand ambassadors. Because of their limited marketing and advertising budgets, SMEs are encouraged to mobilize their customers as ambassadors. In parallel, the democratization of artificial intelligence (AI) offers SMEs important opportunities to redefine customer relationships through tools that was previously reserved for large companies, such as chatbots, and algorithmic personalization. However, the literature remains limited, as research on AI in marketing and OBA has evolved separately. On the one hand, work on OBA [1] does not incorporate AI as an antecedent. On the other hand, research on AI in marketing [2] focuses primarily on large companies without integrating the concept of OBA or considering the specific characteristics of SMEs. This lack of literature is problematic on two levels. First, it fails to explain the psychological mechanisms by which AI technologies can generate OBA behaviors. Second, it deprives SME leaders of a conceptual framework that would allow them to understand how their investments in AI can generate spontaneous brand promotion by their customers. So, this paper raises the following research question: *How does AI act as a lever for Online Brand Advocacy (OBA) in small and medium-sized enterprises (SMEs)?* To address this question, we developed a conceptual framework that connects three domains that have so far been studied separately in the literature: AI in marketing, SMEs, and OBA. This conceptual model relies on two complementary theoretical foundations; the Stimulus-Organism-Response (S-O-R) model [3] ; [4], and the theory of perceived value [5], through the multidimensional PERVAL model. Indeed, this conceptual model links two stimuli related to AI (algorithmic personalization and chatbots), the perceived value they generate (functional, emotional, and social), and the resulting OBA behaviors. Hence, four theoretical propositions are formulated for future empirical validation with SME clients. Overall, the proposed conceptual model shows that the influence of AI-related stimuli on OBA is indirect, acting through perceived value. This influence remains contingent on the resources, size, and digital maturity of the SME, as well as the close relationship it develops with its customers. To conclude, the results of this paper encourage SME leaders to consider AI not only as a tool for operational optimization but also as a lever for creating perceived value, that motivate consumers to engage in online brand advocacy behaviors.

**Keywords**— artificial intelligence, Online Brand Advocacy, OBA, SMEs, perceived value, S-O-R model, conceptual model.

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# From the Classical SCOR Model to the SCOR Digital Standard (SCOR DS): Aligning Quality Management and Digitalization for After-Sales Service Resilience

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## ABSTRACT

In a context of increasing vulnerability of supply chains, the management of After-Sales Service (ASS) and reverse logistics constitutes a major strategic challenge. However, ASS performance is frequently hindered by acute organizational fragmentation between return flows, diagnostics, spare parts management, and customer service.

## PROBLEM STATEMENT

While the coupling between quality management and digital transformation is recognized as a lever for agility, the literature lacks updated operational frameworks that integrate the digitally native dimensions required to address this fragmentation.

## RESEARCH METHODOLOGY

This article draws on a longitudinal intervention research conducted over four years within the logistics platform of a major industry player. The methodological approach adapts the new SCOR Digital Standard (SCOR DS) model to structure the alignment between the Quality Management System (ISO 9001:2015) and the digital architecture (BPMN/ERP). The study specifically analyzes the transition from the traditional SCOR model to SCOR DS in order to steer the Return and execution processes.

## FINDINGS

The empirical findings demonstrate that SCOR DS acts as a powerful catalyst for data-driven integration. The adoption of SCOR DS innovations, particularly the native integration of data flows and continuous synchronization, enabled a shift from a reactive, siloed after-sales service to a predictive and seamless ecosystem. Longitudinal data reveal a significant reduction in return processing cycle time (Return Cycle Time/MTTR), improved flow compliance, and enhanced resilience.

**Keywords—** *After-Sales Service (ASS), SCOR Digital Standard (DS) Model, Digital Transformation, Quality Management, Operational Resilience*

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