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## Section 1. Business economic

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### “UNDERSTANDING HOW GLOBAL MEGATRENDS AFFECT MARKETING STRATEGIES (FOCUSING ON TECHNOLOGICAL AND ENVIRONMENTAL MEGATRENDS)”

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#### Abstract

The dynamic and ever-evolving nature of global megatrends has a profound impact on marketing strategies in today’s interconnected world. Companies can sustainably grow only via taking into consideration the powerful effects of megatrends. This article explores how various global forces influence marketing practices, focusing primarily on technological advancements and environmental concerns as well as how the phenomenon of megatrends has appeared. Digitalization and environmentally oriented activities are becoming more crucial on daily basis, entering every marketing element and business activity of a modern company. Thus, the article illustrates those particular areas and concepts that are being involved into each megatrend as well as their influence on the marketing transformations happening nowadays. By examining the implications of these megatrends on consumer behavior, market dynamics, and business strategies, this article provides insights into the adaptive approaches that marketers need to adopt in order to flourish and grow in this rapidly changing landscape.

**Keywords:** *marketing, megatrends, business, sustainability, digitalization*

#### Introduction:

The 21<sup>st</sup> century has witnessed unprecedented changes in the global business landscape, fueled by megatrends that have reshaped the way companies approach marketing. Global megatrends are powerful, transformative forces that shape the world we live in. These megatrends have a far-reaching impact on various aspects of our lives, in-

cluding the field of marketing. As marketers, it is essential to recognize the significance of these trends and adjust our strategies accordingly. In this article, we delve into the interplay between global megatrends and marketing practices, shedding light on how businesses can harness these trends to their advantage. Understanding and adapting to these megatrends are crucial for developing

effective marketing strategies. Integrating technology, embracing diversity, and aligning with sustainable practices can position businesses at the forefront of the evolving marketplace.

### 1. Megatrends

*“A megatrend is a general direction of development, consisting of several phenomena, or a wide-ranging process of change. They are often considered to occur at the global level and development is often believed to continue in the same direction.”* (Dufva, 2020).

Megatrends are large, transformative forces that shape and influence the future of societies, economies, and industries over an extended period. They are long-term drivers of change that have the potential to impact various aspects of human life. John Naisbit coined the term megatrend in the early 1980s to describe consequent transformations massively taking place not only in the USA, but also worldwide (Slaughter, 1993). Naisbit defined megatrends as profound and pervasive shifts in the world that affect every area of human life, providing a framework for understanding the future (Naisbit & Aburdene, 1982). So, this term entered the language and has been used ubiquitously ever since.

Gaub (2019) found that when contemplating the future, our initial guides are invariably the overarching megatrends. This is because these trends share several characteristics that enable us to narrow down potential futures from an array of infinite possibilities to a more confined space of possibilities. As implied by their name, mega-trends are expansive patterns that manifest on a grand scale, impacting sizable cohorts of individuals, nations, regions, and often, the entire global populace. Mega-trends also unfold over protracted periods; typically spanning at least a decade, and frequently even longer. Most notably, mega-trends are intricately linked to our present circumstances, making them phenomena observable in our world today. Because mega-trends are quantifiable and exert a broad and enduring influence, they impart a heightened degree of visibility to a previously unclear future (Gaub, 2019).

As per Sitra and their last report there are five major megatrends to be currently considered and taken into consideration:

#### – **Natural crisis (Nature)**

We find ourselves amidst an ecological sustainability crisis, where human actions are exceeding the limits of both living and non-living elements of nature. This overextension jeopardizes the foundations of our economy and overall well-being. The need for ecological reconstruction is becoming increasingly urgent, calling for a shift toward a society that enhances both the condition of nature and human well-being.

#### – **Rising well-being challenges (People)**

The population is experiencing aging, diversification, and clustering in growth centers. Mental health challenges are intensified by uncertainties surrounding work, livelihoods, the ecological sustainability crisis, and the ongoing pandemic.

#### – **Democratic shifts (Power)**

Societies are facing increased pressure as multiple crises unfold. Crises have had a dual impact on democracies, both weakening and strengthening them. While the global pandemic has centralized power and restricted crucial democratic freedoms, ongoing global military conflicts mobilized civil society, drawing attention to the democracy crisis. The polarization of discourse, uncertainty, and geopolitical power dynamics underscore the necessity for reevaluating decision-making processes and reinforcing democracy, participation, and citizen empowerment.

#### – **Digital power competition (Technology)**

Technology is advancing swiftly, with novel technologies making inroads into various aspects of life. The collection and utilization of data are on the rise, fueling the creation of tailored services for individuals and organizations. Simultaneously, debates arise over digital power dynamics, encompassing issues such as data ownership, the regulations governing the digital sphere, the resources demanded by technology, and, more broadly, the trajectory of technological progress.

#### – **Economic transformations (Economy)**

The escalation of global inequalities and the ecological sustainability crisis necessi-

tate an overhaul of the economy. Wealth is increasingly centralized among a diminishing number of individuals, and the escalating frequency of extreme weather events, along with the deterioration of ecosystem services, is undermining the operational resilience of the economy. There is a growing emphasis on responsibility in all economic activities.

## **2. Technological progress and its implications for marketing**

Technological progress has undeniably emerged as a megatrend with profound implications across various sectors, including marketing. In 2023, the rapid evolution of technology is redefining the way businesses engage with customers, tailor their strategies, and adapt to an ever-changing digital landscape. The proliferation of smartphones, social media platforms, and e-commerce has altered consumer behavior, creating new opportunities and challenges for marketers. To remain competitive, businesses must embrace digital marketing strategies, invest in data analytics, and adapt to emerging technologies like artificial intelligence and virtual reality (Varadarajan et al., 2020). One of the most palpable impacts of technological progress on marketing is the digital transformation of the industry. As Kotler et al. (2016) assert, *“In the digital age, marketing is no longer about the stuff that you make, but about the stories you tell.”* *The rise of social media, search engine optimization (SEO), and online advertising has reshaped the way businesses communicate with their target audience.*

Technological progress, characterized by continuous innovation and digital disruption, is reshaping the global business environment. In 2023, this megatrend is propelled by several key drivers:

*Artificial Intelligence (AI):* The proliferation of AI technologies is revolutionizing data analysis, personalization, and automation in marketing, allowing companies to deliver tailored content to their audience with unprecedented precision (Smith et al., 2022).

*Augmented Reality (AR) and Virtual Reality (VR):* AR and VR are changing the way consumers interact with brands, offering immersive experiences that enhance engagement and provide innovative advertising

opportunities (Brown & Lee, 2023). According to the research by Statista (2022), the AR market will reach \$198 billion by 2025 (Al-sop, 2022).

*Data Analytics and Big Data:* The era of big data has ushered in a new frontier for marketing professionals. The use of advanced analytics tools in marketing allows for real-time insights into consumer behavior, enabling businesses to make data-driven decisions and refine their strategies (Johnson & Patel, 2023).

The evolving technological landscape has far-reaching implications for marketing strategies in modern business and society. Here are the particular examples:

*Hyper-Personalization:* The ability to collect and analyze vast amounts of data enables hyper-personalized marketing efforts, leading to higher customer satisfaction and conversion rates (Smith et al., 2022).

*Ephemeral Content and Social Commerce:* The rise of short-lived content, such as Stories on social media platforms, and the integration of e-commerce within these platforms are reshaping the e-commerce landscape (Brown & Lee, 2023).

*Sustainability and Ethical Marketing:* Technology-driven transparency allows consumers to scrutinize a company's ethical and environmental practices. Brands must adapt by incorporating sustainable values into their marketing strategies (Johnson & Patel, 2023).

*Voice Search and Smart Assistants:* The prevalence of voice-activated devices demands optimization for voice search, altering SEO and content strategies for marketing (Smith et al., 2022).

Technological progress is a megatrend that continues to reshape the landscape of marketing. From the digital transformation of marketing channels to the integration of big data, artificial intelligence, and immersive technologies, businesses must navigate a rapidly evolving terrain. As technology continues to advance, marketers must remain vigilant, adapting their strategies to leverage the latest innovations while addressing ethical considerations and privacy concerns. The synergy between technological progress and marketing will undoubtedly be a focal point for research and strategic development in the years to come.

### 3. Environmental concerns and its implications for marketing

Growing environmental awareness and the pursuit of sustainability have reshaped consumer preferences and purchasing decisions. Marketers are now tasked with promoting eco-friendly products, reducing waste, and engaging in corporate social responsibility initiatives. Sustainability not only appeals to the environmentally conscious but also serves as a point of differentiation for brands.

Megatrends are enduring, far-reaching shifts that impact various aspects of society, including consumer preferences and business strategies. Over recent years, environmental issues have firmly established themselves as one of the most influential megatrends, shaping various industries and their marketing practices. Nowadays, several key environmental megatrends are driving change:

*Climate Change and Carbon Neutrality:* The urgency to combat climate change is pushing companies to set ambitious carbon neutrality goals and communicate their progress to consumers.

*Circular Economy:* The concept of a circular economy, where products are designed to be reused, recycled, or repurposed, is gaining traction, influencing product design and marketing (Kirchherr, et al., 2023).

*Biodiversity Conservation:* Consumers are increasingly concerned about biodiversity loss, prompting companies to adopt sustainable sourcing practices and communicate their efforts to protect ecosystems.

*Plastic Reduction:* Reducing plastic waste and promoting eco-friendly packaging have become critical aspects of marketing strategies, addressing consumer concerns about plastic pollution.

The environmental megatrend has had a profound impact on marketing practices, influencing various aspects of product development, communication, and consumer engagement. Currently businesses are responding to these trends through different strategies. One of them is a global aim to develop green products (Luchs et al., 2010). Companies are developing environmentally friendly products and highlighting their sustainability features in marketing campaigns. At the same time, arises so-called green marketing – a concept involving promoting prod-

ucts and services based on their environmental benefits. Companies that can demonstrate their commitment to sustainability can tap into a growing market of environmentally conscious consumers. Strategies such as using recycled materials, reducing carbon footprints, and highlighting eco-friendly features can help businesses distinguish themselves in the market (Charter & Polonsky, 1999).

Another response to the environmental megatrend is eco-friendly packaging. The packaging industry plays a pivotal role in modern consumerism, but the environmental repercussions of conventional packaging have prompted a shift towards eco-friendly alternatives. Sustainable packaging is becoming the norm, and companies are using it to convey a commitment to reducing environmental impact. Innovations in material science, printing technologies, and design principles enhance the functionality and appeal of sustainable packaging. Innovation stands as a driving force behind the development of eco-friendly packaging solutions. As per a Markets and Markets report, the worldwide market for biodegradable plastics is projected to witness a surge from \$3.02 billion in 2018 to \$6.12 billion by 2023, with a Compound Annual Growth Rate (CAGR) of 15.1%. This expansion is driven by various factors, such as heightened consumer consciousness regarding the environmental repercussions of plastics, government efforts advocating for the adoption of biodegradable products, and advancements in technologies enhancing the cost-effectiveness and efficiency of biodegradable materials (Biodegradable Plastics Market Size & Forecast, 2023).

Switching to biodegradable packaging offers several compelling reasons for businesses. Firstly, it significantly lessens the environmental impact compared to conventional packaging alternatives. This shift not only aligns with current sustainability trends but also demonstrates a commitment to responsible business practices. Moreover, embracing biodegradable packaging can result in long-term cost savings by eliminating the need for expensive disposal methods. This financial benefit contributes to the overall economic viability of the business (Carter, 2020).

Beyond the financial aspect, this eco-friendly choice resonates positively with

customers. Demonstrating a commitment to environmentally conscious practices can enhance one's brand image and potentially attract more customers, fostering increased business. This phenomenon might be additionally positively supported by sustainable storytelling, via which marketers are using storytelling to communicate a brand's sustainability journey and choices, connecting with consumers on a deeper level (Fisher, et al., 2022). Another helpful tool here might be the cause marketing approach, when for-profit and non-profit organizations collaborate with each other.

Engaging in cause-related marketing enhances brand visibility and exposure for the nonprofit collaborator. Given that nonprofits often operate within constrained marketing budgets, forming partnerships with small businesses or corporations proves instrumental in disseminating information about their initiatives and causes to a wider consumer base that might otherwise remain untapped. Nonetheless, the corporate partner stands to gain substantial advantages, such as meeting the demand for corporate social responsibility, enhancing corporate image, cultivating a bond with the community, augmenting brand loyalty, elevating employee morale and distinguishing from competitors (How to Use Cause Related Marketing?, 2022).

Finally, in the contemporary business environment, Corporate Social Responsibility (CSR) has become an integral aspect of organizational strategy. Businesses are integrating CSR initiatives into their marketing efforts to showcase their commitment to environmental and social causes. A critical aspect of the relationship between CSR and marketing is the impact of socially responsible initiatives on brand image. Companies that actively engage in CSR can enhance their brand reputation and create a positive association with consumers (Kotler & Lee, 2005). CSR activ-

ities contribute to building and strengthening consumer trust. When a company is seen as socially responsible, consumers are more likely to trust its products, services, and overall business practices. Also, consumers increasingly consider a company's CSR practices when making purchasing decisions (Maignan & Ferrell, 2004). They may prioritize products or services from companies that align with their values and contribute positively to society. In summary, a company's commitment to social responsibility plays a crucial role in shaping consumer attitudes and behaviors. Beyond the immediate benefits of a positive brand image and enhanced trust, companies that prioritize CSR are likely to enjoy long-term relationships with loyal consumers who appreciate and support their ethical practices.

### Conclusion

Global megatrends are not static; they continuously evolve, shaping the world in unpredictable ways. To thrive in this dynamic environment, marketers must adapt their strategies to address the challenges and opportunities posed by these megatrends. Understanding the implications of technological advancements, environmental concerns, demographic shifts, and geopolitical changes is essential for staying relevant and competitive in the ever-changing marketing landscape. By staying informed and agile, businesses can harness the power of global megatrends to their advantage and remain at the forefront of their industries. Businesses that integrate sustainability into their marketing strategies can gain a competitive edge, strengthen brand loyalty, and contribute to addressing pressing environmental challenges. As consumer environmental awareness continues to rise, the role of environmental issues in marketing will remain prominent in the years to come.

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## Section 2. Economic security

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### FOOD SECURITY IN TUNISIA THROUGH AQUATIC PRODUCT CONSUMPTION

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#### Abstract

This paper examines the main factors influencing the local demand for fish compared to other meat products in Tunisia. The double logarithmic econometric model AIDS (Almost Ideal Demand System) is used in the present study. We particularly aimed by using data panel from the Tunisian National Institute of Statistics at estimating the effects of direct and cross prices, income, and geographical area on this local fish demand. Results showed that prices of this foodstuff and of others substitutable products, consumers income and geographical area are significant factors that seem to influence fish demand, thus, explaining 83% of the variability in fish demand in Tunisia. We showed disparities in fish consumption between the coastal and interior regions of the country. This trend is further accentuated. We also demonstrated that fish products are of great importance for food security and could replace red meat (particularly lamb meat) once available at cheaper prices.

**Keywords:** *Demand, factors, food safety, fish, meat, Tunisia*

#### 1. Introduction

Globally, fisheries and aquaculture play a vital role in the socio-economic development and in food security. Indeed, this industry constitutes a direct and indirect means of subsistence for 10% of the world population, and provides more than 4.5 billion people with at least 15% of their average animal proteins needs (Béné, et al., 2015). According to the latest FAO studies, global meat consumption is expected to increase by 15%

by 2030 in the context of increasing world population and socio-economic development (Henchion, et al. 2017). Increase in meat production and consumption would certainly have a negative impact on the environment, through greenhouse gas emissions, and on natural resources by mainly increasing the use of water and land resources (Henchion, et al., 2017). Among meat products, seafood can provide a less polluting and resource-depleting source of animal proteins.

Fish products constitute, in fact, a source of high quality proteins and with lower carbon footprint compared to other animal products (Henchion, et al., 2017). Moreover, their contribution to global food security is increasingly raised in food policies (Stetkiewicz, et al. 2022).

Fish demand analysis has been the subject for several research studies worldwide. Recently, determining factors of fish consumption around several authors have analyzed. For instance, Kresic et al. (2023) studied the major factors (notably level of knowledge and information) affecting fish consumption. Pupavac et al. (2020) studied the socio-demographic factors associated with fish consumption in Croatia. They demonstrated that Croatian consumers prefer locally produced wild products much more than farmed products, and that prices is a determining factor in this demand. Qasim, et al. (2020) analyzed the factors influencing fish consumption in a sample population in Pakistan. They noted, using a linear regression model, that fish prices, proximity to rivers, and family size have negative effects on fish consumption, while the number of fishing equipment, education level and family income have a positive effect on this consumption. Supartini, et al. (2018) studied changes in fish consumption and associated factors in the United Kingdom and Singapore based on a population sample. They showed that the consumers age, prices, dietary benefits as well as religious concerns significantly influence fish consumption.

Other studies have dealt with barriers to fish consumption, notably Wilaya et al. (2022), Rahman (2020) Resaiepandari (2017), Chistonson (2017), Vanhonacker et al (2010), Trondsen et al. (2003), Skuland (2015), Brunso et al. (2009), etc. However, the econometric modeling of fish demand based on income, price and region, and comparing it with meat demand, through statistical panels has not been sufficiently addressed.

In Tunisia, Dhehibi, et al. (2005) analyzed the local demand for fish products. They demonstrated that this demand is inelastic with respect to prices. Consumption of seafood mainly depends on the incomes and the consumers – purchasing habits according to the same authors. Dhraief, et al. (2011) confirmed the findings of Dhehibi, et

al. (2005) by proving disparities in seafood consumption between coastal and continental Tunisian inhabitants depending on the availability and supply of fish products, consumption habits and product quality.

This article contributes to the analysis of fish demand compared to other meat products in Tunisia, by studying the determining factors (particularly direct and cross prices, income of consumers and geographical area that could affect fish consumption in Tunisia. We also analyzed the contribution of these products to food security at the national level. Hence, we aimed at showing if fish products could replace other meat products, particularly red meat which industry is in crisis (variability in fodder production and its dependence on climatic hazards, increase in production costs and sales prices, instable production, etc.). We also aimed at showing if the Tunisian consumer would accept this substitution in the local consumption. These topics related to fish demand in Tunisia have not been sufficiently addressed, to our knowledge. The originality of this work, moreover lies, in verifying the following hypotheses: (i) fish consumption is influenced by fish products price, cross-prices and consumer income; (ii) fish consumption depends on Tunisian geographic regions; (iii) fish could replace meat in the Tunisian diet.

## **2. Contribution of fish and other meat products to national food security**

In Tunisia, the meat diet mainly consists of fish and other seafood products, red meat, poultry meat. Consumption estimations values of these products per capita – year are respectively at 10.8 kg, 12.4 kg and 20.6 kg in the latest Tunisian statistics (2015). These quantities represent respectively 24.88%, 28.31% and 47.031% of global consumption of animal protein. Moreover, evolution of the national consumption of these products shows that poultry meat is most demanded. Consumed quantities have indeed increased from 7.5 kg/person/year in 1990 to 20.6 kg/person/year in 2015, therefore recording a growth rate of 173.33%. Contrariwise, the average consumption per person-year of red meat fell by 18,42%, (from 15.2 kg/person/year in 1990 to 12.4 kg/person/year in 2015). That of fish products

slowly evolved over the past decades with a growth rate of 9.09%, hence ranging from 9.9 kg/person/year in 1990 to 10.8 kg/person/year in 2015.

Over the same period, although poultry products occupies the first place in term of consumed quantities, their production expenses occupied the second place (29.51% of all expenditure). Red meat occupies by far the first place (68.76% of all expenditure).

Fish expenditure remains the lowest, not exceeding 2%.

Evolution of the highest budget share was recorded by red meat, with a growth rate of 237.97% over the period 1990–2015 ranging from 50.6 Dt to 171.014 Dt per person- year. That of poultry also experienced a marked increase with a growth rate of 109.33% that of fish experienced however a slight decline by -49.41% over this same period.

**Table 1.** Evolution of consumption and expenditure on fish and other meat products

	1990		2015	
	Quantity (kg/ person/year)	Expenditure (Dt/ person/year)	Quantity (kg/ person/year)	Expenditure (Dt/ person/year)
<b>Fish</b>	9.9	8.5	10.8	4.3
<b>Red Meats</b>	15.2	50.6	12.4	171.014
<b>Poultry</b>	7.5	12.4	20.6	73.4

Source: INS, 2015

### 3. Materials and methods

Analysis of the demand for seafood products in Tunisia was carried out using economic and econometric approach. The later, describes how consumption of a good varies following changes in prices and/or consumers' budget and by estimating the price and income elasticities of this good. The used approach allows also for predicting the evolution of this demand.

The parametric forms of complete demand systems treated in the literature are numerous. One of the reference models for estimating the demand for food is the double logarithmic econometric model (Almost Ideal Demand System or AIDS, Deaton and Muellbauer 1980). This model is general, easy to estimate and does not require specificities (Ravelosoa, 1999). It is also known for its flexibility and linearity (Khaldi, et al., 2009).

#### 3.1. Model overview

The estimation tool used is Eviews. The logarithmic function estimating the model is as follows:

$$\text{Log } Q = C + \alpha_i \text{Log}(\rho_i) + \sum_{k=0}^n \beta_j \log \log(\rho_i)$$

With:

**Qi:** quantity of fish consumed from good i (fish),

**C:** constant

**αi:** direct elasticities,

**βj:** cross elasticities,

**pi:** price of good i (fish),

**pj:** price of good j (other meat products)

The used data part from national surveys on household budget, consumption and standard of living elaborated by the Tunisian National Institute of Statistics on a sample of households'. This sample is representative of different socio-economic categories and during the period 1980–2015. Before estimating the different parameters, and in order to improve their quality it was important to control and test this data first.

Econometric analyzes on expenditure elasticity are calculated for all fish. Those of cross elasticities concern the main products that are potentially considered as substitutable or complementary of fish products, in particular red meat (lamb and veal) and poultry meat and eggs. Descriptive statistics for these variables are presented in Table 2.

**Table 2.** Descriptive statistics of explanatory variables

	Quantity (dt)			Price (kg)		
	Moy	Min	Max	Moy	Min	Max
<b>Fish</b>	105590.43	83779.00	153572.00	5901.29	1564.50	14826.10
<b>Red meats</b>	219094.44	143800.00	376200.00	11466.86	2928.25	29085.50
<b>Poultry meat</b>	119941.66	55000.00	200000.00	2994.06	1094.00	6854.00
<b>Eggs</b>	1470.00	930.00	2157.00	108.14	51.00	219.00

Source: Notre élaboration

**4. Direct price, cross price and income elasticity of fish demand**

**4.1. Effect of food expenditure**

Estimation of fish and meat products demand (Table 3) shows that the coefficients of determination ( $R^2$ ) as well as the F-test

statistics confirm the relationship that exists between fish consumption and food expenditure. The elasticity is significant at the 5% threshold. The results obtained prove that fish is a normal good whose consumption increases in line with income increase.

**Table 3.** Estimated parameters of fish demand as a function of income

Demand's model	Fresh fish	Poultry	Beef	Meats Lambs
<b>Variable</b>	Coefficient	Prob.	Coefficient	Prob.
<b>C</b>	0.004	0.500	0.011	0.015*
<b>Food expenses</b>	0.594	0.000**	0.414	0.000**
<b>R-squared</b>	0.833**	0.992**	0.480*	0.404*
<b>Log likelihood</b>	82.894**	92.067**	52.631**	53.913**
<b>Durbin-Watson stat</b>	0.465	1.464	0.164	0.161
<b>Prob (F-statistic)</b>	0.000**	0.000**	0.001**	0.006**
<b>F-statistic</b>	29.832**	740.030**	5.533*	4.061*

Source: Our development. \* Significant by 10% \*\*Significant by 1%

Likewise, by comparing the average between income groups and the quantities consumed of fish and meat, the ANOVA analysis

shows that the consumption of these products depends significantly on consumer income (Table 4).

**Table 4.** Comparison of average meat and fish consumption in relation to consumer income

	Sum of squares	ddl	Average of squares	F	Signification	
<b>Fish</b>	<b>Inter-groups</b>	474.124	7	67.732	12.059	0.001*
	<b>Intra-groups</b>	44.935	8	5.617		
	<b>Total</b>	519.059	15			
<b>Meats</b>	<b>Inter-groups</b>	2415.804	7	345.115	5.526	0.014**
	<b>Intra-groups</b>	499.655	8	62.457		
	<b>Total</b>	2915.459	15			

Source: Our elaboration. \*Significant by 10%,\*\* Significant by 1%

**4.2. Price effects**

Overall, the estimated model and elasticities are significant at the 5% level (table 5). Indeed, the explanatory variables (fish price, red meat price, poultry meat price and egg

price explain 83% of the variability of fish demand in Tunisia. The elasticity of demand for fish in relation to its price is significant at the threshold of 19% indicating a decrease of 8.8% following an increase of 1% in its price.

Compared to the red meat prices, the elasticity of demand for fish has a positive sign indicating the substitution of red meat by fish. Indeed, an increase of 1% in the real price of red meat is accompanied by an increase in demand for fish of 4%. This elasticity has a negative sign with poultry meat and eggs

therefore fish is suggested as a complement to these two foodstuffs. A price increase of these products by 1% leads to a reduction in fish consumption of 23%. This complementarity is stronger with chicken meat than eggs where the cross elasticity is highest in absolute value.

**Table 5.** *Estimated parameters of the double logarithmic model*

Variable	Coefficient	Std. Error	Prob.
<b>C</b>	0.004	0.005	0.500
<b>PFish</b>	- 0.088	0.065	0.185
<b>PRedmeat</b>	0.041	0.043	0.352
<b>PPoultry</b>	- 0.235	0.100	0.026**
<b>PEggs</b>	- 0.008	0.154	0.961
<b>DEPALI</b>	0.594**	0.080	0.000**
<b>R2</b>	0.833	F-statistic	29.832
<b>Log likelihood</b>	82.89	Prob (F-statistic)	0

Source: Our elaboration. \*Significant by 10%, \*\*significant by 1%

Fish supply was also modeled according to the different fish species prices by the Nerlove model used by Bachta, 1991. This reduced model is described according to the following equation:

$$\log(q) = c + \sum_{i=1}^5 \log(pi)$$

The model is statistically significant and the supply theory is validated. The results illustrated in Table 6 show that the aquat-

ic products supply depends on their prices, that explains it by 80%. Indeed, the increase in fish prices intensifies fishing activities which could lead to an uncontrolled increase in the fish supply and consequently it could threaten the sustainability of this sector. Taking into consideration these conditions, aquaculture could be an alternative and a solution to the captured fisheries resources depletion.

**Table 6.** *Estimated parameters of fish supply based on their producer prices*

Variable	Coefficient	Std. Error	Prob.
<b>C</b>	0.080	0.024	0.003
<b>Whiting price</b>	0.080	0.024	0.002
<b>SARDINE PRICE</b>	0.421	0.127	0.097
<b>OCTOPUS PRICE</b>	0.091	0.053	0.059
<b>Cuttle fish Price</b>	0.339	0.173	0.133
<b>Moy price Fish_</b>	-0.826	0.034	0.0106
		0.303	
<b>R<sup>2</sup></b>	0.800		
<b>Log likelihood</b>	43.020		
<b>F-statistic</b>	24.065		

Source: Our elaboration

### 5. Regional influence on fish consumption

Analysis of fish consumption by region shows that there is a remarkable disparity. It

is the North East region which has the highest level of fish consumption with 16.5 kg / person /year, followed by the Greater Tunis area (9.9 kg/person/year) then the region from

the Central East (8.8 kg/person/year) and finally the South East region (6.5 kg/person/year). The lowest average fish consumption was recorded in the Central West, South West and North West regions where the average consumption of these products is less than 4 kg/person/year. This difference between regions could be explained by the availability of fish and its accessibility in coastal areas much more than in inland regions. Consequently, it influences the eating habits in each region.

Monitoring the evolution of fish consumption in the different Tunisian regions between 2005 and 2015, proves that the disparity in fish consumption between coastal and inland regions is increasing. It tends to increase in coastal regions and decrease in inland regions. The highest consumption rise was recorded in the North East region, going from 8.5 kg per person in 2005 to 16.5 kg / person / year in 2015. It is followed by the Central East zone which experienced a remarkable increase in the average fish consumption from 3.2 kg in 2005 to 9.3 kg. On the other hand, the highest decrease is noticed in the South East region, going from 18.9 kg / person/year in 2005 to 6.5 kg / person/year. Consumption in the Greater Tunis region is almost kept stable at around 10 kg while in the Central West and North West regions it is maintained low at around 4 kg.

The average consumption of red meats in the different Tunisian regions are comparable and very close to the national average

which is around 32.5 kg / person / year. The highest level of these products consumption was recorded in the Greater Tunis region with an average of 38.6 kg/ person /year. These products consumption evolution over the period is increasing in the majority of regions over the period 2005–2015. The Central East region experienced the most notable increase, going from 24.4 kg/person/year to 34.6 kg/person/year. It is followed by the Greater Tunis region whose consumption increased by 6.4 kg/person/year. Then, it is the North-West region, which occupies the third place with an increase of 5.6 kg/person/year. It is only the South East region, which experienced a decrease of 4.1 kg per person. The national average is also increasing, from 26.9 kg in 2005 to 32.5 kg in 2015.

ANNOVA analysis was carried out in order to make a comparison between the interior regions (North-West, Central West, South-West) and coastal regions (Grand Tunis, North East, Central East and South East) in terms of fish and meat consumption (table 6). A significant difference in consumption between the two regions of 1% for fish and 10% for meat was noted. It was also observed that there was a positive correlation between the fish and meat consumption. Indeed, regions that have high averages of meat consumption they also have the highest averages for fish consumption. Thus, it's the income that determines the consumption of these products:

**Table 7.** Comparison of fish and meat consumption in inland regions and coastal regions

	Product	Sum of squares	ddl	Average of squares	F	Signification
<b>Meats</b>	Inter-groups	106.287	2	53.144	2.824	0.082*
	Intra-groups	395.129	21	18.816		
	Total	501.416	23			
<b>Fish</b>	Inter-groups	161.494	2	80.747	5.863	0.009**
	Intra-groups	289.216	21			
	Total	450.710	23			

Source: Our development \*Significant by 10%, \*\*significant by 1%

### 6. Discussion

It emerges from this work that the demand for fish elasticity in relation with food expenditure is significant (at the 5% threshold) and that fish is a normal good which consumption depends significantly on consumer's income.

Its consumption increases when the income improves. These results confirm the work of Dhehibi, et al (2005) where they demonstrated that the consumption of these products depends on income. Compared to direct prices, it has also been demonstrated that this elas-

ticity is also significant (at the 5% threshold), which contradicts the results obtained by the same work of Dhehibi et al (2005) where it was revealed that the demand for these products was found inelastic regarding the price. It was also demonstrated, for the first time, that the elasticity of demand for fish in Tunisia has a positive sign with red meat indicating their substitution. Consequently, aquatic products could replace red meat known by its production instability and by its continuous costs production and price increase. On the other hand, fish, chicken, meat and eggs are complementary products.

The examination of fish consumption in the different Tunisian regions showed the existence of a remarkable disparity in consumption between inland regions and coastal regions, which confirms the work of Dhraief et al. (2011). Indeed, the coastal regions (North East, Greater Tunis) have the highest level of fish consumption followed by the Central East and South East zone. Interior regions notably the South West, Center West and North West record low fish consumption levels.

## 7. Conclusions

We conclude that fish could play a crucial role in food security according to its production and other meat products. Thus, in a context of increasing production costs of red meat and consequently their prices increase, the Tunisian consumer could substitute red meat by fish when the latter is cheaper.

In inland regions, fish consumption remains below the national average and much lower than consumption in coastal regions. Examination of the evolution of this demand has shown that this disparity is increasing over time. The availability of a good fish quality could improve fish consumption in these regions. Promoting packaging as well as transport could guarantee a suitable supply of these products to interior regions.

Statistical data of aquatic products in Tunisia gather them into a single product even though they include several by-products with very variable prices. Improving statistical data would make it possible to carry out additional research to study fish products demand taking into consideration this variability

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## Section 3. Economics, organization and management of enterprises, industries, complexes

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### RESEARCH OF APPLICATION FEASIBILITY OF INTERNATIONAL QUALITY MANAGEMENT MODELS AT AZERBAIJAN HIGHER EDUCATION INSTITUTIONS

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#### Abstract

In the field of employment, as well as in the direction of increasing socio-economic indicators until 2030, when analyzing the determined strategic directions of the Republic of Azerbaijan, it is seen that the training of knowledgeable and competent personnel is noted as the main conditioning factor for achieving stable and sustainable economic development. At the same time, according to the relevant legislation of Azerbaijan, the main goal of higher education institutions is to prepare qualified students for the labor market, and for this, higher education institutions should pay attention to the management of the quality of the education system in accordance with the requirements of the labor market. In the world, there are self-approved models applied in quality management in the fields of production and services, and it is possible to apply these models by higher education institutions operating in Azerbaijan (with the exception of specialized higher education institutions).

**Keywords:** *Higher education institutions, labor market, quality assurance, quality management models*

#### Introduction

According to the relevant provisions of the “Law On Education”, educating of competitive students in the local and international labor market is shown as one of the main quality in-

dicators of the educational institutions (Law of the Republic of Azerbaijan, 2009). At the same time, the documents, such as “Azerbaijan 2030: National Priorities for socio-economic development” (Decree of the President of the

Republic of Azerbaijan 2021), “Socio-economic development strategy of the Republic of Azerbaijan in 2022–2026” (Decree of the President of the Republic of Azerbaijan 2022–2026), “Employment Strategy of the Republic of Azerbaijan” (Decree of the President of the Republic of Azerbaijan, 2019–2030) have been mutually analyzed, and it is seen that one of the main tools for the country to achieve stable and sustainable economic development is student training in accordance with the quantitative and qualitative requirements of the labor market. Thus, having the knowledge and skills required by the labor market will increase employment opportunities, as well as the efficiency of labor activities, which in turn will lead to the improvement of the economic indicators of the country and the economic well-being of the population. Thus, international and local scientific studies show that the average monthly salary of people who have quality education in the labor market is higher than other people, and this leads to higher purchasing power and socio-economic well-being in their economic life.

Students who will create added value and boost the country’s economic development by engaging in labor activities should acquire a large part of their skills and competences in higher education institutions. However, international and local studies show that despite the fact that the importance of competent and skilled personnel training according to the requirements of the labor market is emphasized at every opportunity by the higher education institutions operating in the Republic of Azerbaijan, concrete activities and models in this field have not been presented. At the same time, the results of surveys conducted among students studying in higher education institutions operating in the Republic of Azerbaijan show that students do not feel ready for the labor market after graduation. The mentioned issues actualize the issue of quality management of education at higher education institutions.

There are different quality management models in the world. The feasibility of applying these models by higher education institutions operating in the Republic of Azerbaijan should be analyzed taking into account local legislation, education policy and higher education management.

## Methodology

During the research, quality research was conducted and quality management models applied in the international arena in the field of production, service and education were mutually analyzed. The feasibility of applying the mentioned models as a quality management model by Azerbaijani higher education institutions was investigated taking into account respective local legislations and normative legal acts, higher education policy and management.

## Quality Management Models

When looking at international and local researches on quality management, it can be seen that there is no single definition of the concept of quality, as well as the results of the research show that it is impossible to have a single approach to the above mentioned concept. Thus, different definitions have been given to “quality” depending on the characteristics of the field in which it is applied, the expectations of customers, the degree of importance of their satisfaction for the enterprise, as well as the indicators by which enterprises operating in the relevant field compete with each other to increase their income. In modern economic conditions, the main goal of the production and service sectors, which aim to increase their competitiveness by maximizing their income and minimizing their costs, is to achieve an increase in market share by increasing customer satisfaction. For this, there are well-known 4 quality management models accepted in the international arena:

1. Deming Award;
2. Malcolm Baldrige’s Framework for Excellence;
3. EFQM Excellence Framework;
4. ISO quality management standards.

### **1. Deming Award:**

The award was established in 1951 in honor of W. Edwards Deming, who played an irreplaceable role in conducting economic reforms and applying statistical process control (SPC – Statistical Process Control) in Japan from the point of view of production quality management. The purpose of the Deming Prize is to promote the development of quality management systems, as well as the application and development of quality tools

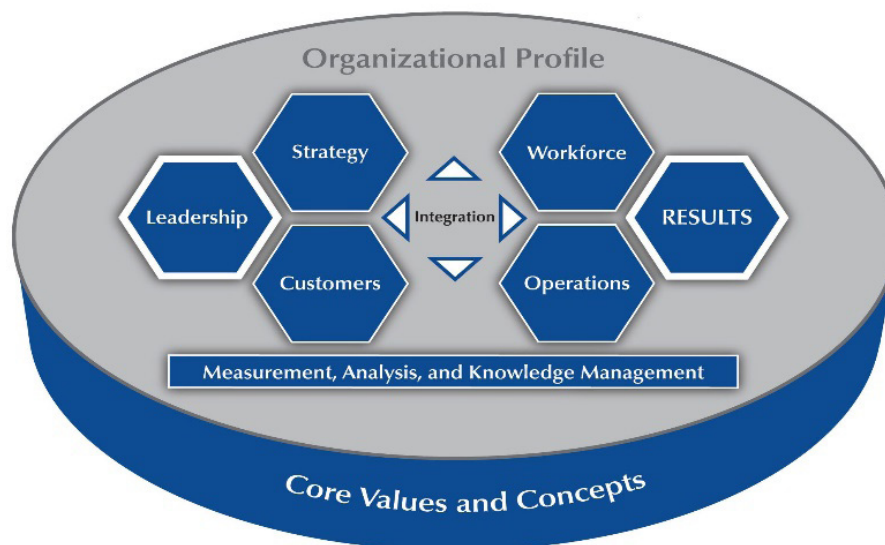
or statistical methods that allow to improve work in organizations ([https://www.kpms.ru/EN\\_general\\_info/EN\\_Deming\\_Prize.htm](https://www.kpms.ru/EN_general_info/EN_Deming_Prize.htm)). This award is considered the first and most prestigious award in the field of quality management.

In order to be awarded the Deming Award, criteria have been established for enterprises in accordance with the relevant directions, and these criteria reveal the quality management model and activities of the enterprise. The first of the mentioned directions is the “Policies”. When we look at that criteria set for the relevant direction, it is seen that the enterprise should have quality management processes, policy documents and long-term and short-term action plans, and these documents should be clear, understandable and accessible, and communication with interested and related persons should be established. When analyzing the criteria defined for “Organization” which is mentioned as the 2<sup>nd</sup> direction, it can be seen that the organizational form of the enterprise should serve the management and increase of quality, participation in management should be ensured, hierarchical vertical and horizontal relations between structures should be clearly defined. The responsibilities and powers of individuals should be clearly defined, and the efficiency of communication with external stakeholders should be ensured. In the criteria for “Information” mentioned as the 3<sup>rd</sup> direction, it is stated that the enterprise should continuously collect internal and external data and analyze the received data using certain tools to make decisions about the next steps. Compliance of the enterprise’s activity with the standards defined in the relevant field was mentioned as the 4<sup>th</sup> direction of Deming’s criteria. Thus, it is noted that the enterprise must take into account the minimum standards set for its activities and continuously monitor the state of compliance with the standards. The criteria of the 5<sup>th</sup> direction mentioned as the direction of human capital improvement and management state that the enterprise should continuously involve human resources in training and development programs, create awareness in them about the concept of quality and standards, and support them for self-realization and development. Quality assurance and

quality monitoring are defined as the 6<sup>th</sup> and 7<sup>th</sup> directions, and the criteria for diagnosing and managing the quality of the processes in the relevant directions are mentioned. However, when looking at the criteria in these directions, it is seen that the relevant criteria apply to enterprises that apply a production chain that wants to increase their income and reduce their costs. As a result of quality monitoring, taking improvement or preventive steps and then diagnosing the effect of these steps are shown as directions 8 and 9. After the activities in the above-mentioned 9 directions, the enterprise should prepare future plans based on the obtained results as the last direction ([https://www.kpms.ru/EN\\_general\\_info/EN\\_Deming\\_Prize.htm](https://www.kpms.ru/EN_general_info/EN_Deming_Prize.htm)). When looking at the criteria of the Deming Award, it can be seen that strategic planning and implementation, quality assurance and monitoring, information management and strategic human resources management are the main directions, which higher education institutions located in Azerbaijan can operate based on these criteria. Because the institutional accreditation evaluation criteria of higher education institutions in the Republic of Azerbaijan also include relevant directions and criteria, and the legislative basis for activities in this direction has also been formed.

## **2. Malcolm Baldrige’s Framework for Excellence (for education):**

The Malcolm Baldrige Award was established by the United States Senate in 1987. The main purpose of establishing this award was to apply the secret of increased competitiveness in Japan and to increase the declining production in the country as a result of the application of Deming’s criteria since 1951. At the same time, by measuring the quality criteria of enterprises and learning and sharing good practices with other partners, it was to influence the increase of quality in the business sector and thus the achievement of customer satisfaction. Applying these criteria, educational research has shown that Baldrige-based organizations outperform their non-Baldrige peers on nearly every critical measure, including higher graduation rates, lower dropout rates, and higher student performance on multiple measures (Decree of the President of the Republic of Azerbaijan, 2019–2030).

**Picture 1.** *Malcolm Baldrige's Framework for Excellence*

Source: <https://baldrigefoundation.org/who-we-are/history.html>

The criteria for the Malcolm Baldrige Framework for Excellence vary across domains. When looking at the criteria in the field of education, it is noted that the enterprise operates in 7 directions for quality management. First of all, there are directions related to the management of the enterprise, where there are criteria for managing the enterprise in accordance with modern requirements. In the other direction, the criteria related to the development, improvement and implementation of the company's strategy were reflected. According to the relevant quality management model, the 3<sup>rd</sup> direction is to study the requirements of customers and involve them as interested parties in the processes. As the 4th direction, criteria for measurement, analysis and data management are given. Effective workforce management and purposeful design of operations are presented as areas 5 and 6, respectively. The last direction mentions the analysis of the implementation results of the aforementioned directions in order to take the next improvement steps and to ensure evidence-based decision-making (Decree of the President of the Republic of Azerbaijan, 2019–2030), which reflects the philosophy of the PDCA and PDSA stages, which is called the Deming cycle. When looking at the Malcolm Baldrige criteria, it can be seen that strategic planning, implementation and management, quality assurance and monitoring, information management and strategic human re-

sources management are the main directions in which higher education institutions located in Azerbaijan can operate based on these criteria. Because the institutional accreditation evaluation criteria of higher education institutions in the Republic of Azerbaijan also include relevant directions and criteria, and the legislative basis for activities in this direction has also been formed.

### **3. EFQM Excellence Framework:**

EFQM is a non-profit organization that was first established in Europe and later recognized internationally and has its own quality management model (Law of the Republic of Azerbaijan, 2009). In the EFQM Excellence model, 3 main directions are noted, which are the direction of the enterprise, the execution of processes and results. In the issue mentioned as the direction of the enterprise, the main criteria are defined as the strategic development and management of the enterprise. In the criteria defined as the second direction, the enterprise's involvement of stakeholders, the formation of a sustainable and stable value chain, and the establishment of a transformation environment were mentioned. As the last direction, the results are mentioned, and here the importance of analyzing the strategic results and studying the perceptions of the interested parties is shown.

When the directions and criteria of the EFQM Excellence Framework are analyzed, it appears that activities should be carried out in

the direction of strategic planning, implementation, management and the use and management of information for subsequent decision-making according to this quality model (Law of the Republic of Azerbaijan, 2009). Higher education institutions located in Azer-

baijan can operate based on these criteria, because the institutional accreditation evaluation criteria of higher education institutions in the Republic of Azerbaijan also include relevant directions and criteria, and the legislation for operating in this direction has been formed.

**Picture 2.** EFQM Excellence Framework:



Source: <https://efqm.org/the-efqm-model/>

#### 4. ISO quality management standards:

ISO defines standards agreed upon by experts around the world and recommended the implementation of the ISO 9001:2015 quality management standard for manufacturing and service industries as well as educational institutions by 2018. However, looking at the criteria and notes on the mentioned standard, it was understood that it is intended for businesses aiming to maximize their income and minimize their costs. At the same time, the relevant standard consistently emphasizes the importance of a customer-centered system, but does not distinguish between the customer and the learner for educational institutions, as in the Mal-

colm Baldrige criteria. Taking all this into account, ISO announced its new standard for educational institutions under the name ISO 21001–2018.

When analyzing the 21001–2018 standard set by ISO for educational institutions, it can be seen that enterprise management, strategic planning, support services, performance evaluation and improvement directions are mainly defined as quality management (<https://baldrigefoundation.org/who-we-are/history.html>). According to these standards, it is possible to come to the same conclusion that the higher education institutions located in Azerbaijan can operate based on these criteria, as there are no restrictive conditions related to these directions.



### Summary

When looking at the directions and criteria established for the 4 quality management models (Deming application award criteria, Malcolm Baldrige Excellence Framework, EFQM Excellence Framework and ISO 21001–2018) adopted in the field of quality management in the world based on a mutual analysis, it can be seen that according to the mentioned 4 quality management models most of the activities and criteria are similar and are as follows:

1. Strategic planning, implementation and management activities;
2. Quality assurance, monitoring and improvement activities;

3. Data collection, processing, analysis and use in decision-making;

4. Efficient allocation and management of resources;

Analyzing the possibility of applying the mentioned quality management models by higher education institutions operating in Azerbaijan, we come to the conclusion that higher education institutions located in Azerbaijan can operate based on these criteria. In addition, the institutional accreditation evaluation criteria of higher education institutions in the Republic of Azerbaijan also include the relevant directions and criteria mentioned in the models analyzed above.

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## EFFECTIVENESS OF USE OF LAND RESOURCES BY AGRICULTURAL ENTERPRISES OF THE REGION

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### Abstract

Any state's riches and prosperity are based on its land, and the effectiveness with which it is used determines the nation's level of technological advancement. The amount of agricultural production and the food crisis are intimately tied to the wise use of land resources, which is crucial for the growth of the national economy. The primary component that has a major impact on the socioeconomic conditions in specific regions, as well as the nation at large, is the efficiency of agricultural land usage. It has been determined that the adoption of a set of actions aimed at maintaining and improving crop productivity, soil fertility, and the creation of favorable conditions for the growth and development of crops, labor, and human vitality can result in the effective use of land resources.

**Keywords:** *land resources, agricultural lands, agricultural enterprises, efficiency of use, production of products*

### Introduction

Land resources are extremely important for the development of the country, regions, and society in general. They are the basis for agricultural production, where food products are grown that ensure food security for the population. Effective use of land resources by agricultural enterprises is a key factor in achieving the development of the region. These include optimal planning of land use, balanced arrangement of agricultural land, protection and restoration of

soil cover, rational use of water resources, and consideration of ecological aspects. Productive use of land resources contributes to the economic development of the region, creating jobs, providing income for the rural population, and contributing to the growth of GDP. In addition, efficient use of land can have a positive impact on social development, providing access to food, improving the living conditions of the rural population, and developing infrastructure and social services.

### **Methodology and the purpose of the study:**

The methodological basis of the research is a systematic approach to the study of economic processes based on the dialectical method of cognition, the use of scientific developments of domestic and foreign scientists on the effectiveness of the use of land resources of agricultural enterprises, legislative and regulatory acts of the state authorities of Ukraine regarding the development of agriculture. In the process of developing theoretical generalizations and formulating conclusions and proposals, such methods of economic research were used as *analysis* and *synthesis* (study of theoretical and practical provisions of effective use of land resources), *abstract and logical* (theoretical generalizations and formation of conclusions), *statistical and economic* (analysis of modern state and level of efficiency of land use in agricultural enterprises) and others.

**Research objectives:** determination of practical aspects regarding the effectiveness of the use of land resources for agricultural production in the Khmelnytskyi region.

### **Literature review**

The following Ukrainian scientists deal with the issue of effective use of land resources, namely: Averchev, O. V., Hunchenko, O. V., Zinchenko, O. I., Koshkaldaa, I. V., Lazarijeva, O. V., Semenda, O. V., Tomchuk, O. F. and others.

Thus, O. V. Averchev investigates the effectiveness of using the potential of land based on indicators of the cost of gross production, productivity, and the level of profitability of production of the main types of products (Averchev, O. V., 2020).

O. F. Tomchuk believes that the efficiency of using the land resource potential of agricultural enterprises is determined by calculating the cost of produced products per unit area. This indicator reflects not only the use of land but also the entire production potential of the enterprise, its compatibility, and its interchangeability (Tomchuk, O. F., Kozhukhar, V. V., 2019).

O. V. Lazarijeva examines the effectiveness of land use through the calculation of indicators characterizing the degree of land use, the level of land use, the sown area of

agricultural land, the yield of crops and their gross harvest, the production of products per person (Lazarijeva, O. V., 2020).

Such diverse methodological approaches to the study of the efficiency of land use form a broad subject field for further study of its problems.

### **Analysis of results**

The main prerequisite and natural basis for the functioning of an agricultural enterprise is the high efficiency of the use of land resources, which are the most important factor in production and, thanks to fertility, have an active influence on the production process. Being the material basis of agricultural development, and an invaluable national wealth, the land represented by agricultural land is a global factor of production, a base for the organic combination of other production resources (Hutorov, O., 2006).

Land resources in the case of their use form about 95% of the volume of the food fund and 2/3 of the fund of consumer goods and are the primary factor of production, the basis of the economy of Ukraine. If we consider the total land resources of our country, then the largest component is agricultural land, which is the basis of production formation. In this aspect, the fact that Ukraine is an agricultural country plays its role. It should be noted that land, as a resource for ensuring the well-being of the state, makes up 40% of the total fund of all available resources, and accordingly, income from the use of land makes up almost 45% in the process of forming the state budget (Muzyka, P. M., Urba, S. I., Honcharenko, L. V., 2019).

If we consider all the available lands of the Khmelnytskyi region, the following distribution can be made: agricultural lands — 1,560.5 thousand ha; forests and other forested areas — 294.4 thousand ha; built-up land — 132.6 thousand ha; land under water — 41.0 thousand ha; open wetlands — 13.8 thousand ha; other lands — 20.6 thousand ha.

Important indicators of the efficiency of the use of land resources by agricultural enterprises are the productivity and gross collection of agricultural products. The conducted analysis of the level of economic efficiency of land use in agricultural enterprises testified to the tendency to increase the volume of

gross agricultural products. The criterion of effective land use in the region is the average amount of agricultural products produced per person, which increased during the analyzed period and indicates that agriculture produces more products with fewer resources and labor, which is positive for the economy and sustainable development. As a result of the study of the production of products by agricultural enterprises in the section of the main crops, an increase in the gross collection and productivity was established, except for sugar beets, potatoes, and vegetable crops; an increase in productivity indicates the success of the measures that were taken to increase the yield of crops. The largest expansion of the harvest area is observed for sunflowers, which is associated with a large export demand. With a reduction in production costs and a significant increase in profit, there is a tendency to increase the profitability of operating activities and all activities. These positive changes characterize the ability of the region's agricultural enterprises to make a profit from their activities as a result of their effective use of land resources.

The increase in the production of domestic agricultural products in enterprises is due to the cultivation of high-margin crops: wheat, corn, soybeans, rapeseed, sunflower, and others. In animal husbandry, agricultural producers prefer early maturing branches of animal husbandry: poultry and pig breeding. In search of high prices for agricultural products, producers prefer to sell them on the world market. In 2021, agricultural products worth USD513,184.9 thousand were exported. The USA, which is 127.8% more than in 2017 accounted for 55.9% of the exported products of all branches of the region's economy. That is, the export of products of the

region is raw material-oriented, which restrains the formation of the gross added value of the industry and does not have a strong potential for the application of intensification measures in agriculture.

As for import revenues from the agricultural sector to the economy of the region, it can be stated that in 2021 agricultural products were imported in the amount of 32,662.3 thousand dollars. USA, which is 57.9% more than in 2017. Products of animal and vegetable origin account for 70.0% of the import of all products of the region. In general, we can say that national food security is formed at the expense of own production of agricultural products and is less dependent on imported food products. However, the export of finished products is 31.1% lower than the import. This situation is economically unjustified, as gross added value is washed out of the national economy.

### Conclusions

Khmelnitskyi region development is greatly impacted by agricultural firms' efficient utilization of land resources. The main objective of this influence is to maximize the use of land potential to achieve economic, social, and environmental goals. This is ensured by the growing volumes of agricultural production, the region's economic growth concerning an increase in GDP, the development of related infrastructure and service industries, the creation of new jobs, luring investments into the region and the agricultural sector, raising the local population's standard of living, guaranteeing food security, and protecting the environment. By considering and advancing these aspects, the region's socioeconomic landscape will be able to advance to new heights.

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## Section 4. Marketing

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### MODERN VIEWS OF MARKETING STRATEGY IN MANUFACTURING ENTERPRISES

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#### Abstract

This article explores the implementation and effectiveness of various marketing strategies in manufacturing enterprises, focusing on digital marketing campaigns, trade shows, and content marketing. The primary objective of these strategies is to enhance brand awareness and increase lead generation. Through a comprehensive analysis, the article evaluates the impact of these strategies on lead conversion rates, website traffic, social media engagement, and return on investment (ROI). The article concludes with strategic recommendations for manufacturing enterprises to optimize their marketing efforts, including enhancing digital presence, refining content marketing strategies, leveraging data analytics, and focusing on sustainable and eco-friendly marketing practices.

**Keywords:** *manufacturing marketing, digital marketing campaigns, trade shows, content marketing, brand awareness, lead generation, marketing analytics, social media engagement, return on investment (roi), sustainable marketing practices*

#### Introduction

Creating an effective marketing strategy for manufacturing enterprises is essential in today's competitive business landscape. This article will delve into the intricacies of developing a robust marketing plan tailored for manufacturing companies. We'll explore key areas such as understanding your market, leveraging digital marketing tools, building a strong brand, and engaging with customers through various channels.

We'll also discuss the importance of integrating technology and innovation in your marketing approach, focusing on how manufacturers can utilize digital platforms and data analytics to reach their target audience more effectively. Additionally, the article will highlight the significance of sustainability and eco-friendly practices in marketing, which are increasingly becoming a priority for consumers.

By the end of this article, manufacturing enterprises will have a comprehensive

understanding of how to craft a marketing strategy that not only reaches but also resonates with their desired audience, driving growth and establishing a strong market presence.

**Literature review**

Considering the different points of view of scientific authors, we can highlight the following similar features:

1. Marketing strategy includes a set of various marketing activities to promote goods or services.

2. Marketing strategy includes a marketing plan.

3. Marketing strategy is the most important element of strategic planning of an enterprise.

4. The concept of a marketing strategy does not provide an accurate description of the activities that must be carried out as part of its formation due to the constant change in the economic situation and the uniqueness of each enterprise.

5. The concept of “marketing strategy” is used both for enterprises and for banks (Bespalko, V. A., 2019).

**Table 1.** *The concepts of “marketing strategy” in the works of domestic and foreign scientists*

Authors	Ideas
F. Kotler	“A marketing strategy is a logical scheme of marketing activities by which a company hopes to achieve its marketing objectives” (Kotler, F., 2017).
J. O’Shaughnessy	“Marketing strategy is a broad concept of how product, price, promotion and distribution should function in a coordinated manner to overcome resistance to achieving marketing objectives” (Shaughnessy, J. 2017).
V.A.Bespalko, N. V. Vakhrusheva, K. S. Savina	“Marketing strategy is an element of a company’s overall strategy that describes how the company should use its limited resources to achieve maximum results in increasing sales. Marketing strategy is the actions taken by an enterprise, the main idea of which is to increase the productivity of the work process” (Bespalko, V.A. 2019).
I.Kalandarova, E. U. Turgunov, Sh. Sh. Norov	“Marketing strategy is an element of a company’s overall strategy (corporate strategy) that describes how a company should use its limited resources to achieve maximum results in increasing sales and sales profitability in the long term” (Kalandarova, I., Turgunov, E.U., Norov, Sh. Sh., 2019).

**Results**

Manufacturing marketing is the process of creating and executing a plan to promote and sell products to customers. The goal of manufacturing marketing is to generate sales and build brand awareness.

There are many different aspects to consider when developing a manufacturing marketing plan, including target markets, product positioning, pricing, promotion, and distribution. A well-executed manufacturing marketing plan can help to increase sales, expand into new markets, and build brand recognition.

The marketing function in a manufacturing company is responsible for creating demand for the products that the company pro-

duces. Marketing plays a vital role in ensuring that the items a company offers are known and used by potential customers. Marketing also helps build customer relationships, which can result in repeat business.

Manufacturers can use many different channels for marketing their products, including advertising, public relations, direct marketing, and online marketing. It is important that they select the right mix of marketing activities to reach their target audiences effectively.

A well-planned and executed marketing campaign can help a manufacturing company to increase sales, grow its customer base, and enter new markets. To be successful, manufacturers need to understand their

customers' needs and wants and design their marketing activities accordingly.

In addition, manufacturers need to track the results of their marketing campaigns carefully so that they can make necessary adjustments to improve their effectiveness.

There are some key ways in which marketing for manufacturers differs from marketing to consumers.

For one, the manufacturing sector is still mainly B2B (business-to-business), meaning that companies market their products and services to other businesses rather than to individual consumers.

In 2022, the total value of digital B2B sales will be 5 trillion dollars (<https://katana-mrp.com/marketing-for-manufacturing/>). Also, during this period, the D2C method of e-commerce, that is, selling directly to the consumer, became popular. This method accounted for 64% of total e-commerce in 2022 (<https://www.statista.com/forecasts/1346429/consumers-buying-d2c-worldwide>).

This distinction means that the target audience for manufacturing marketing is typically narrower than for consumer marketing, instead of trying to reach a mass market, manufacturers typically only need to focus on reaching a few key decision-makers within each potential customer company.

Another key difference between manufacturing marketing and consumer marketing is the nature of the products or services being marketed.

Manufacturing companies often sell complex products or services that require a significant investment on the buyer's part, such as industrial machinery or MES software. As a result, the buyer's decision-making process is typically more involved than for consumer purchases, and marketing communications need to be carefully crafted to provide the right information at each stage of the process.

Finally, the sales cycle for manufacturing products or services is usually much longer than for consumer products. This means that manufacturers need to take a long-term view when planning their marketing activities, focusing on building relationships and trust with potential customers rather than making a quick sale.

There are a number of different marketing strategies that manufacturing companies can use to achieve their objectives. For example:

**Content marketing.** One common marketing strategy for manufacturing companies is content marketing. By creating and distributing high-quality content, you can position your company as an expert in your industry and build trust with potential and existing customers (Ryan, Damien 2015).

This type of marketing can take many forms, such as blog posts, eBooks, infographics, case studies, videos, and more. It's important to create content that is targeted at your ideal customer and provides value.

To be successful with content marketing, you need to have a plan. Decide what kinds of content you want to create and how often you wish to release it. Then, create an editorial calendar to help you stay on track.

In addition to creating your own content, you can also curate content from other sources. This can be a great way to supplement your content and give your audience various perspectives.

**Trade shows and events.** Trade shows and events are another great marketing strategy for manufacturers, mainly because the people attending these events are already interested in what you have to offer. So make sure to attend trade shows relevant to your industry and use them as an opportunity to network with potential and existing customers.

You can also use trade shows and events to showcase your latest products and services and to generate leads. Make sure to have a well-designed booth highlighting your brand, and make sure your staff is trained to engage with attendees properly.

**Partnerships and collaborations.** As a manufacturer, you can also partner with other companies or collaborate on projects to reach a larger audience and generate more exposure for your business.

This can be an effective way to build your brand and expand your customer base. It can also help you tap into new markets and access new resources and technologies.

When partnering with another company, choosing a partner complementary to your business is essential. For example, partnering with a company that sells electrical equip-



ment would be a good fit if you manufacture electrical components.

It's also important to have a clear understanding of the partnership arrangement before you get started. Make sure you know who will be responsible for what and how the partnership will benefit both companies.

**Social media marketing.** Social media marketing is another effective marketing strategy for manufacturers. Social media lets you connect with potential and existing customers and build relationships (<https://katanamrp.com/marketing-for-manufacturing>).

To succeed with social media marketing, choosing the right platform for your business is crucial. Depending on your industry, some platforms will be more effective than others. For example, LinkedIn is a great platform for B2B companies, while Instagram is better suited for B2C companies.

It's also important to create quality content that is targeted at your audience. Post content that is interesting and informative, and be sure to include calls to action.

In addition to your own social media channels, you can also use paid social media advertising to reach a larger audience. This can greatly help you to boost brand awareness.

**Search engine optimization.** Search engine optimization (SEO) is another important marketing strategy for manufacturers. Optimizing your website and content for search engines can improve your visibility and attract more visitors to your site.

It's crucial to understand how search engines work and what people are searching for to be successful with SEO. Once you know this, you can optimize your site accordingly. This includes things like choosing the right keywords, creating quality content, and building links.

SEO can be a complex topic, but plenty of resources are available to help you get started. There are also agencies that specialize in SEO and can help you create a successful strategy.

**Pay-per-click advertising.** The last one we're going to touch upon is pay-per-click (PPC) advertising. PPC is another effective marketing strategy for manufacturers. With PPC, you can create ads and only pay when someone clicks on them. This makes

it a cost-effective way to generate leads and boost brand awareness.

To succeed with PPC, choosing the right keywords and creating effective ads is important. You also need to bid on the right keywords and track your results so you can adjust your campaign as needed.

The first step is to sit down and think about what you want to achieve with your marketing efforts. Are you looking to:

- Increase brand awareness;
- Drive sales;
- Boost customer loyalty.

Once you have a clear idea of your objectives, you can start thinking about who is your target audience. Trying to appeal to everyone is not only tricky, but it's also not very effective. It's much better to focus your efforts on a specific group of people who are more likely to be interested in what you have to offer.

Now that we've gone over the best practices, let's see some of the main challenges. You'll notice a bit of overlap with the previous list, indicating that while certain things can be quite challenging, they are too useful to just ignore.

**Reaching the right audience.** One of the most common marketing challenges is reaching the target audience. In a world where consumers are bombarded with marketing messages from all directions, breaking through the noise and reaching your ideal customer can be difficult.

To effectively reach your target audience, you need to clearly understand who they are and what they're looking for. Once you know this, you can develop a marketing strategy that will resonate with their needs and interests.

**Generating leads.** Another common challenge manufacturers face is generating leads. Even if you have a great product or service, unless you have people to sell it to, it won't matter.

There are many ways to generate leads, but focusing on quality over quantity is important. It's better to have a smaller number of high-quality leads than a large number of unqualified ones.

To generate leads, you can use a variety of marketing tactics, such as content marketing, search engine optimization, and social media marketing.

Converting leads into customers. Generating leads is one thing, but converting them into customers is another challenge entirely. You still need to close the deal even with a great product and strong marketing strategy.

There are many ways to convert leads into customers, but focusing on building relationships and providing value is crucial. If you can do this, you'll be in a much better position to close the deal. Creating compelling content. To market your product or service effectively, you need to create compelling content. This can be a challenge for many manufacturers, as they may not have much experience creating content.

To create compelling content, you need to understand what your audience is looking for and what will resonate with them. Once you know this, you can develop a content strategy to help you reach your goals. If you're having trouble creating compelling content, consider working with a content marketing agency or hiring a freelance writer.

Measuring results. Finally, one of the challenges manufacturers face is measuring the results of their marketing efforts. This can be difficult, as there are a lot of factors that go into any given marketing campaign.

To effectively measure your results, you need to set up a system that tracks your progress and allows you to see which tactics are working and which ones aren't. Once you have this data, you can adjust your strategy accordingly.

### **Conclusion and recommendations**

The implementation of comprehensive marketing strategies in a manufacturing en-

terprise, encompassing digital marketing campaigns, trade shows, and content marketing, has demonstrated its effectiveness in increasing brand awareness and lead generation. The strategic application of these methods has successfully navigated the unique challenges and opportunities within the manufacturing sector, leading to measurable improvements in market presence and customer engagement.

### **Recommendations**

Focus on high-impact trade shows that align closely with the target market.

Develop more interactive and immersive experiences at booths to engage visitors effectively.

Produce more targeted content that addresses specific customer pain points and industry trends.

Utilize analytics tools to gain deeper insights into customer behavior and preferences.

Increase engagement on social media by creating interactive and shareable content.

Invest in CRM tools to better manage leads and customer interactions.

Use CRM data to personalize marketing efforts and improve customer satisfaction.

By following these recommendations, the manufacturing enterprise can not only sustain its current growth trajectory but also adapt to future market changes and emerging opportunities. The key is to remain agile, data-driven, and customer-focused in all marketing endeavors.

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worldwide in 2019 and 2022. URL: [https://www.statista.com/forecasts/1346429/  
consumers-buying-d2c-worldwide](https://www.statista.com/forecasts/1346429/consumers-buying-d2c-worldwide)

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## INFLUENCE OF PRODUCT PACKAGING ON CONSUMER PURCHASES

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### Abstract

The 5 P's of marketing (product, price, promotion, place, and packaging) have already been proven to be beneficial to successfully marketing a product. In this study, we explore the relationship between the uniqueness of product packaging and its level of influence on a person buying that product. Participants were given a questionnaire in which they rated the level of uniqueness of a product without knowing the price and rated their likelihood of purchasing that product. In our findings, we saw that a product that was rated with a higher level of uniqueness encouraged consumers to purchase the product, even if the price was inflated.

**Keywords:** *product packaging, uniqueness, beauty, marketing*

### Introduction

When walking into a store, there are many products sitting on shelves. It is easy to breeze past them without so much of a second glance, but in reality, many marketing teams worked diligently to get that product onto the market.

The question remains: How do retail stores determine what sits on their shelves? A crucial part of that process is research. Marketing research and the use of research to determine business decisions is a key component of building a successful brand (Stiles, 2020). Marketing research is involved for every item consumers purchase, from items sitting on shelves in the grocery store to beauty products found in grocery stores and beauty

stores (Stiles, 2020). It is critical to any business trying to take off and become a global market. According to Kelvin Stiles in *Why Is Market Research Important: We Give You 7 Reasons* (2020), he says, "It provides decision-makers with important information to decide the course of the company, launch a new product, or to keep a tab on what competitors are doing." Research helps a company to ensure the steps it must take to keep the business thriving. Well-known brands such as Starbucks, Apple, McDonald's, LEGO, Dove, and Zappos heavily depend on market research (Cullen, 2022). They use data to keep track of customer satisfaction. In Nicole Cullen's article, *6 Famous Brands That Depend on Market Research* (2022), she

says market research can help corporations achieve the following:

1. Strengthen their reputation and credibility.
2. Enhance brand awareness.
3. Understand market segments and trends in the marketplace.
4. Obtain feedback on customer preferences.
5. Establish the effectiveness of marketing and product promotion.

Starbucks in particular, has spent more than 300 million USD on market research to ensure the corporation can achieve the highest profit and target their customers' wants and desires (Dudovskiy, 2022). Through research and data collection, Starbucks discovered about 43% of customers who order a tea concoction skip the sugar and 25% of coffee drinkers don't add milk (Whitten, 2016). With that data, Starbucks created two unsweetened iced tea K-cups — Mango Green Iced Tea and Peachy Black Tea — as well as unsweetened and sweetened black iced coffee without milk or additives (Whitten, 2016). Tammy Katz, the CEO and founder of Katz Marketing Solutions, told CNBC that Starbucks can practically double consumption because customers want to order their usual drink when they go in-store and are now able to drink it at home as well. By selling K-cup versions of popular drinks using consumer data-collection, Starbucks was able to significantly increase its profits as well as increase the company's popularity. At the end of 2022, Starbucks had a gross profit of 22.313 billion USD, and its gross profit increased by 5.52% year after year (Pereira, 2023). It is evident that while Starbucks has spent hundreds of millions of dollars on market research, it is worthwhile since the margin of profit to money spent has worked tremendously in its favor, continuing to make the brand the number one coffee franchise in the world, with 35.711 stores in the world in 2022 (Statista Research Department, 2022).

The strategies marketers use to attract customers were coined by Jerome McCarthy and his colleague William D. Perrault who created the term "marketing mix" (McCarthy & Perrault, 1972). It contains the 5 P's: product, price, promotion, place, and packaging, all of which are inherent to putting a product out on the market.

1. The product is the item that catches the eye of a passerby who becomes interested in purchasing the product.

2. The price is the cost of the product that marketers take into consideration when deciding how cost influences customers' likelihood of purchasing the item.

3. Promotion is how companies show the item off and its relevance.

4. The place is where the product is distributed, making sure it is placed in large retail stores where it can be noticed.

5. Lastly, the packaging is the gold star of a marketing mix. Packaging is the lime-light of a product being that it is what people notice when they first glimpse at a product (ABC Packaging Direct). It is the difference between someone glancing at a product and turning their attention someplace else, or stopping to stare at the product and seeing if it is worth the purchase.

These 5 P's make up the perfect concoction of how to market a product to make it successful as well as the brand itself. In marketing research, product packaging is often neglected as a critical ingredient of what initially catches a consumer's eye (Stiles, 2022).

Product packaging is often misunderstood because it provides a quick and simple way to aid customers in differentiating between parallel products and increase their impulse to buy a product (Wells et al., 2007). For instance, there are many different types of pens and brands that create them. It becomes increasingly difficult to tell apart a good pen from a bad one when they practically all write the same. At some point, there really is no difference. There becomes a tendency for people to lean toward purchasing a pen their eyes are more attracted to (Behe et al., 2013). Therefore, many consumers begin to look at the packaging of the pen, specifically the color, shape, and design of the pen. The more visually appealing it is, the higher the likelihood the person is going to buy the pen. The more ordinary and traditional the pen is, there is a lower chance of someone buying the pen and instead looking elsewhere for something that not only works well, but appeals to the eye.

One industry that relies heavily on captivating packaging is the cosmetics industry. Since many beauty products are very similar,

packaging becomes a way to aid consumers in differentiating between similar products and increases their desire to buy a product (Wells et al., 2007). For example, there are many different types of moisturizers and brands that create them. It becomes challenging to tell apart two moisturizers that contain the same ingredients and are advertised to improve skin in the same way. For this reason, there is an inclination for people to purchase items their eyes are more drawn to (Behe et al., 2013).

Questions regarding the packaging of beauty products are of key economic importance, as the cosmetics industry is a multi-billion dollar business with the market having a revenue of 136.4 billion USD in 2020 and is estimated to amount to 181.5 billion USD in 2027 (Statista). With many brands trying to keep up in the competitive industry, companies are trying to find new and innovative ways for the product to become more unique. For instance, a bottle of Caudalie Radiance and Complexion Correcting serum is a traditional-looking bottle with a dropper (see Image A below). Other products contain unique packaging that is the signature of the brand. For example, the Glow Recipe Niacinamide Dew Drops serum is a bottle in the form of a raindrop (see Image B below). Now, this serum is famed not just for its watermelon scent, but also for the innovative shape of the bottle. The notorious packaging catches the eye but can also be a symbol of recognition for the brand.



Image A



Image B

Caudalie Radiance and Complexion Correcting Serum Glow Recipe Dew Drops

A well-known marketing principle is the “unique selling principle” (Rosenblum, 1961). A term conceived by Rosser Reeves, a successful US advertising executive and chairman of the Ted Bates agency, who wrote

his three principles for unique selling propositions in his 1961 book *Reality in Advertising* (Bergh & Behrer, 2016):

1. Each advertisement must display a benefit proposition to persuade the customer.
2. The proposition must be a unique one that rival companies do not offer or are unable to offer.
3. The proposition must be solidified so that it is able to affect millions of people.

As many beauty products are similar, companies want a signature look to their products that will make people more drawn to them (ABC Packaging Direct). Bergh and Behrer (2016) argue that uniqueness in product and presentation increases this likelihood. Companies that have a certain degree of uniqueness are the most successful and have a greater chance of becoming a globally renowned brand (Johnson & Soenen, 2003). With the beauty market being viciously competitive, companies are constantly using colors, shapes, and designs, to deliver happy feelings to a consumer (Raheem, et al., 2014). Graphics, specifically, are a necessary component to creating a unique look for a product (Oaya, et al., 2017). Graphics display a product’s individuality and emphasize the brand’s name, which helps it stand out on shelves (Oaya, et al., 2017). Customers are able to familiarize themselves with a brand by recognizing the unique graphics of the brand. Color is arguably one of the most important aspects of marketing a product. Color can differentiate brands and give them an element of color ownership in which other brands are unable to replicate or it becomes difficult to recreate (Oaya, et al., 2017). The makeup brand Urban Decay is known for its metallic tones in its packaging (see Image, C below) and Patrick Ta’s brand is known for its rose gold reflecting product packaging (see Image D below). In addition, certain cultures use color to represent many different ideas. The Chinese culture, for instance, has the color red deeply embedded in its culture to symbolize happiness and joy (Kutuzova, 2020). Charlotte Tilbury’s brand celebrated Chinese New Year by creating a setting spray that had red flowers on the cap. A product’s packaging becomes a “salesperson” as the product is trying to appeal to a passerby (Oaya, et al., 2017). By introducing

colors of people's cultures, companies are able to attract people of those cultures as well as others who have an appreciation for different cultures' symbols. For those reasons, product packaging is quintessential to a company's branding and its eventual success. About 106.88 million women use make-up daily according to a statistics report in 2020 (Statista Research Department, 2023). With that being said, companies would like as many of that percentage to buy their products. With careful deliberation on product packaging as well as other factors, companies have the potential to make their brand a globally renowned name.



Image C



Image D

Urban Decay All Nighter Setting Spray  
Patrick Ta Crème Contour & Powder Bronzer

Packaging plays a vital role in catching customers' eyes as the use of color, material, designs, and other characteristics increases impulse buying behavior and the likelihood of them becoming loyal customers to the brand, and these attributes are all influenced by the graphic design of the packaging (Mazhar, et al., 2015). Researchers have even claimed that packaging design is a strategic brand issue that has the ability to attract many consumers and should be part of the primary importance of marketing (Kauppinen-Räsänen, 2014). Product packaging is a brand's signature and can attract many of today's customers. Many companies work with packaging suppliers to find the perfect shape, design, and color of their packaging to represent their product which will ultimately target the most amount of consumers (Mazhar, et al., 2015).

This study will elaborate on how product packaging influences the likelihood of a per-

son buying that product. The study is significant in that it examines the roles of price and packaging in a diversified, multi-billion-dollar industry. The purpose of this current study was to utilize consumer behavior and preferences to come to a conclusion regarding price and packaging preferences. Interestingly enough, there is not enough research currently on the effect of consumers' income and their willingness to purchase unique products. Therefore, the current study will use wealth as one measure in our analysis to see if there are any socioeconomic effects in our study.

### Hypotheses

Hypothesis #1: Due to the potential impact of uniqueness in packaging, we hypothesize that the more unique a product is, the more likely they are to buy it, even if the price is artificially higher.

Hypothesis #2: The possibility of wealth having an impact on consumer purchasing has led us to hypothesize that people with more income are more inclined to buy expensive products they might find unique.

Hypothesis #3: The impact of uniqueness in packaging could persuade consumers to purchase a product without knowing the price, so we hypothesize that consumers will be interested in purchasing a product based on its packaging rather than focusing on its price.

Hypothesis #4: Age could have a factor in consumer purchasing, so we hypothesize that young women are more likely to keep up with social media trends and influences and be more in tune with a product's uniqueness compared to others on the market.

### Method

We recruited 124 participants ( $F = 121$ ,  $M = 3$ ) to take an online survey via Google Forms. The average time to complete the survey was 21.3 minutes. The survey was designed to test participants' willingness to buy beauty products based solely on the uniqueness of their packaging, and above and beyond price (to ensure that brands were not a factor, we hid the brand name on the packaging for every item. We were interested in how participants' ratings of uniqueness would influence their willingness to buy a product, even if the price was increased by 50%. Therefore, half of our sample (Group A) took

a version of the survey where the prices for every other item were increased by 50%, and every remaining item's price was reduced by 50%. To ensure a clean counterbalancing of this design, the second half of the sample (Group B), took the same survey and saw the same items. All participants completed the survey in less than thirty minutes.

### Results

Hypothesis #1: Due to the potential impact of uniqueness in packaging, we hypothesized that the more unique a product is, the more likely consumers are to buy it, even if the price is artificially higher.

A Pearson correlation coefficient was computed to assess the linear relationship between uniqueness score and willingness to purchase an item even at a price 50% higher than its current market value. Results showed that there was a significant positive correlation between the two variables,  $r(122) = 0.82, p = .001$ . This suggests that participants who rated the items as more unique were indeed more likely to buy those items, even if the price is artificially increased.

Hypothesis #2: The possibility of wealth having an impact on consumer purchasing has led us to hypothesize that people with more income are more inclined to buy expensive products they might find unique.

When examining the responses by income levels, there were no statistically significant differences between group means as determined by a one-way ANOVA ( $F(6,118) = 1.397,$

$p = .15$ ). This suggests that there was no significant relationship between participants' income and their desire to purchase more expensive products.

Hypothesis 3: We hypothesized that consumers will be interested in purchasing a product based on its packaging rather than focusing on its price.

A Pearson correlation coefficient was computed to assess the linear relationship between the willingness of participants to purchase an item without knowing the price and their rating of the item's uniqueness. There was no significant correlation between the two variables,

$r(122) = -0.0103, p = .63$ . This result suggests that there was no significant relationship between participants' willingness to buy

an item without knowing both the price and their rating of the item's uniqueness.

Hypothesis #4: We argue that age could be a factor in consumer purchasing, such that young women are more likely to keep up with social media trends and influences. Therefore we hypothesize that young women are more likely to keep up with social media trends and influences and be more in tune with a product's uniqueness compared to others on the market.

A Pearson correlation coefficient was computed to assess the linear relationship between age and uniqueness scores across all items. There was a significant negative correlation between the two variables,  $r(122) = -0.62, p = .02$ . This result suggests that younger female participants were more likely to rate items as more unique, therefore supporting our hypothesis.

### Discussion

The purpose of this study was to examine the effects of how product packaging influences the likelihood of consumer purchases. By taking into account consumer behavior and preferences, we came to a conclusion regarding price and packaging preferences. There was a significant amount of participants who said uniqueness contributed to their willingness to purchase a product at a price 50% higher than its actual market price. Age and uniqueness also had a significant effect on how participants rated the uniqueness of a product. In comparison, there was no significant correlation between a participant's desire to buy a product without knowing the price and how unique they found the item. While we predicted wealth to have an impact on consumers' buying tendencies, there was no relationship found in this study.

It is evident that given the information found in the study, companies should prioritize creating and developing unique packaging designs for their products. Researchers have claimed that packaging design is a strategic brand issue that can attract many consumers and should be part of the primary importance of marketing (Kauppinen-Räsänen, 2014). Unique packaging gives a unique perspective on how packaging can take different shapes and forms. As mentioned earlier, the Caudalie Radiance and Complexion Correcting serum does not have



its own distinct shape. It is a typical bottle and dropper. The Glow Recipe Niacinamide Dew Drops is a pearlescent pink teardrop bottle. When walking into a store, if someone were to see the two side-by-side, their eyes would immediately be attracted to the Dew Drops, the reason for this being the Dew Drops are unconventional-looking. People want to look at something new and different, not something that is too familiar. Ordinary doesn't capture attention, so if companies want to skyrocket their sales, spending time and money on packaging would significantly aid them in their goal.

In our study, we found a significant positive correlation between the level of uniqueness and willingness to purchase a product at a 50% inflated rate than the actual market value. Our study supports our initial hypothesis that consumers lean toward buying products they find unique. The study found that a product that was rated with a higher level of uniqueness prompted consumers to purchase the product, even if it was expensive. By inflating the price, we were interested to see if consumers were still interested in buying the product based on its packaging. This suggests that price is not a huge factor when browsing for beauty products as people are more tempted to buy the item based on its exterior without having a large consideration for how much it costs. An explanation for this is that unique product packaging attracts consumers' eyes and positively relates to their buying behavior (Mazhar, et al., 2015).

When looking into the relationship between age and uniqueness, we found a significant negative correlation between the two variables. The study found young women were more likely to rate beauty products as unique rather than older women. This finding supports our hypothesis that age could have a factor in consumer purchasing. A possible explanation for this is younger women tend to roam social media more often and are more prone to keeping up with beauty trends rather than middle-aged women. Young adults are constantly on social media, with 88% of 90 to 29-year-olds using social media (Hruska & Maresova, 2020). In comparison, only 35% of older age groups use social media (Hruska & Maresova, 2020). For instance, Instagram is a popular social

media app that contains many beauty trends and about 50% of its users are between the ages of 18 and 38 (Perrin, 2015). With young women constantly scrolling through social media, those interested in makeup and skin-care products are more prone to keep up with trendy products versus middle-aged women who might not have social media, therefore being unable to stay up to date on new products on the market.

No noteworthy relationship was found between the urge for a participant to buy a product without knowing its market value and how unique they find the product. This finding differs from our original hypothesis which stated that consumers were more prone to purchasing products by paying attention to its packaging rather than its price. A possible explanation is that while packaging plays a large role in consumers' purchasing behavior, price is ultimately a large factor that weighs in on consumers' purchasing decisions. The 5 P's of marketing, as mentioned above, includes price. It suggests that price is also a large component of consumer purchasing behavior and consumers are still aware of how much they are willing to spend on an item.

The relationship between participants' income and their desire to purchase luxury beauty products was insignificant. The results of this study contradict our original hypothesis which suggested that a consumer with more income had a higher tendency to buy luxury beauty products. This implies that wealth does not have a huge factor in consumers' purchasing decisions. However, it is possible that wealth does play a factor in the tendency for consumers to buy products but in our study, we had few wealthy people, with only 17 people having more than \$60,000. With a wider range of people, a relationship between the two variables might be found.

For beauty companies wanting to know more, eye-tracking is an effective way to track customers' visual attraction to a product. Visual stimuli have been proven to influence consumers' purchase behavior and can help companies better understand how to package their products (Clement, 2007). By tracking consumers' visual attraction, companies can confirm uniqueness in packaging has the ability to have longer attention spans on that particular product.

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## Section 5. Regional Economy

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### KARAKALPAKSTAN — CHINA: PROMISING JOINT PROJECTS

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#### Abstract

The article examines the dynamics of cooperation between the regions and assesses the potential of joint initiatives in various areas such as infrastructure, energy, agriculture, science and ecology. The author discusses the importance of deepening interaction between Karakalpakstan and China to achieve mutual benefit and sustainable development. The article calls for further cooperation and exchange of experience in the implementation of promising projects, taking into account the interests of both sides and the preservation of the region's natural resources.

**Keywords:** *investment, cooperation, agriculture, machinery, infrastructure, business forum*

#### Introduction

Cooperation between regions is of strategic importance in the modern world, especially in the context of economic, scientific and cultural development. In this context, the interaction between Karakalpakstan and China is a vivid example of a dynamic and multifactorial partnership. Both regions have unique opportunities and resources, which, combined, can contribute to the creation of a favorable platform for mutually beneficial development.

In recent years, both sides have shown increasing interest in expanding their interaction in various fields, from economics to cultural exchanges. This interest is based not only on economic and political benefits, but also on the desire to cooperate in addressing

common challenges such as infrastructure development, energy security, and environmental protection.

#### Main part

In today's world, cooperation between countries plays a key role in economic development, social stability, and cultural exchange. Cooperation in the field of agriculture is particularly important, which not only ensures food security, but also contributes to strengthening international relations.

In this context, it is worth highlighting a significant online meeting held at the State Committee of Veterinary and Livestock Development of the Republic of Uzbekistan with a representative of the Chinese company "Tianjin Kaiteng Investment Group Co,

Ltd” and Professor Wang Wenjie. The discussion of a promising project on the creation of an agricultural research and production park in the Republic of Karakalpakstan became an important step in deepening cooperation between Uzbekistan and China.

For these purposes, the necessary land area has been allocated in Kegeyli district, and organizational work is underway to import seeds of fodder crops from China. The project is planned to be fully realized in 2021–2024. Its total cost is 90 million US dollars, more than 450 jobs are planned to be created here. Once the cluster starts working at full capacity, 20,000 cattle, five million Beijing ducks and 500 tons of shrimp will be raised here annually (URL: <https://uza.uz/ru/posts/240683>).

This project is not only aimed at developing the agricultural sector in the region, but also represents a prospect for creating new jobs and increasing agricultural production. The desire to introduce modern technologies and strengthen trade and economic ties confirms the importance of this cooperation for both countries.

Agriculture plays a significant role in the economy of Karakalpakstan, being one of the main pillars of the region’s development. In this context, a group of entrepreneurs from Karakalpakstan participated in the international exhibition of construction technologies, goods and equipment “Constructtech – 2018”, as well as in the Uzbek-Chinese business forum held in Beijing (International Exhibition of Construction Technologies, 2018, <https://uza.uz/posts/132164>).

This event was organized in accordance with the instruction of the President of the country Shavkat Mirziyoyev, who visited Karakalpakstan in December 2017 (Address by President. 2017). The purpose of the trip was to attract foreign investment and develop new projects for agriculture in the region. Cooperation between the Consular Section of the Ministry of Foreign Affairs of the Republic of Uzbekistan in Nukus and the Chamber of Commerce and Industry of Uzbekistan played an important role in organizing this business trip.

Within the framework of the visit, members of the delegation had an opportunity to

get acquainted with the activities of one of the leading machine-building enterprises of China – “Sany” Corporation, specializing in the production of special construction machinery. This allowed entrepreneurs from Karakalpakstan to gain valuable experience and knowledge about modern technologies that can be applied in agriculture to improve production and increase the efficiency of agricultural work.

Participation of the President of the Republic of Uzbekistan, Shavkat Mirziyoyev, in the state visit to Shenzhen on January 25, 2024, was a significant event in the context of the development of economic relations between Uzbekistan and China. During the business program, an important moment was the meeting of the head of the Uzbek state with the chairman of the board of directors of “SANY” company, Xiang Wenbo” (State visit of the President of the Republic of Uzbekistan. <https://president.uz/ru/lists/view/6992>).

The meeting confirmed the plans of “SANY” company to implement the construction of a wind farm in the Republic of Karakalpakstan, as well as localization of production of components for wind turbines and construction equipment. It is important to note that the head of the Uzbek state instructed to develop a road map to accelerate the implementation of the agreements reached at the meeting.

This step is an important evidence of Karakalpakstan’s aspiration to develop the renewable energy sector and create a favorable investment environment for foreign companies. Cooperation with SANY opens new prospects for the energy infrastructure and economic development of the region, emphasizing the importance of strengthening long-term partnerships between Uzbekistan and China.

The delegation headed by the Chairman of Jokargy Kenes of the Republic of Karakalpakstan A. Orynbayev took part in partnership meetings in the People’s Republic of China on November 23, 2023.

Within the framework of the practical visit of the head of state in October 2023, at the invitation of the President of the People’s Republic of China Xi Jinping, an agreement was reached to adopt a “road map” of joint

projects. The main purpose of the visit was to hold meetings with the heads of major Chinese companies, familiarize with their activities and develop promising cooperation projects.

The members of the delegation for the first time took part in the forum on investment and tourism development within the framework of Karakalpak-Chinese business forum organized at the Embassy of Uzbekistan in Beijing. Meetings with representatives of a number of large companies of China were held at the forum.

Preliminary agreements were reached on organization of marble and gold processing by flotation method with Ji An Tai Technologies, on delivery of passenger transport with Norinco International, on production of equipment for renewable energy with Liaoning Lide Investment Holdings Group Pte. Ltd, as well as on the development of a program to ensure food security in Karakalpakstan with Guangdong Urban & Rural Planning and Design Institute Co. LTD. Also, an agreement worth 1.4 million dollars was signed to expand trade and economic cooperation.

As part of the visit program, Chairman of Jokargy Kenes of the Republic of Karakalpakstan A. Orynbayev and members of the delegation met with Secretary of the Party Committee of Jiangsu Province Xin Changxin to strengthen and develop cooperation.

Detailed information was also provided on the essence and significance of the decrees and resolutions of the head of state on Karakalpakstan, as well as the opportunities created for entrepreneurs.

The guests visited World Group's agricultural machinery manufacturing enterprise in Zhengjiang and familiarized themselves with the products in the exhibition pavilion. At the meeting with the head of the company Zhu Lingzuan, an agreement was reached on

the development of agricultural machinery production in the region, including the Aral Sea region, as well as the establishment of a company for the assembly and maintenance of agricultural machinery in the Republic of Karakalpakstan.

Also fruitful was the meeting with the head of the Board of Directors of Chinese company Jiansu Tiansheng Pharmaceutical Co., LTD Ji Hao, who emphasized the continuation of cooperation and implementation of new projects.

During the visit, meetings of different formats were held with major Chinese businessmen, and cooperation agreements were signed, including four investment agreements totaling \$135.3 million between limited liability companies "Karakalpak sement" and "Shah polan" of Karauzyak district (Visit of the Chairman of Jokargy Kenes. <https://uza.uz/posts/541610>).

### Conclusion

The article reviewed promising joint projects between Karakalpakstan and China and identified key areas of cooperation in various fields. Partnership between these regions promises mutual benefits, promoting economic development, cultural exchange and strengthening diplomatic relations. Against the backdrop of dynamic changes in global politics and economy, cooperation between Karakalpakstan and China represents an encouraging prospect for both sides. Support for the introduction of modern technologies, exchange of experience and resources create favorable conditions for the sustainable development of both territories. Thus, the prospects for joint projects between Karakalpakstan and China represent an important element of the global strategy to strengthen mutually beneficial cooperation in the region.

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