

The Impact of Market Economy on Students' Field-of-Study Selection in Upper Secondary Schools in Tehran

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ABSTRACT

Objective: This study aimed to examine the impact of the market economy on students' field-of-study selection in Tehran's upper secondary schools.

Methods: This applied research employed a descriptive-survey design. The statistical population included all male upper secondary students in Tehran during the 2021–2022 academic year. A sample of 383 students was selected using multi-stage cluster sampling. In the qualitative phase, 8 educational and economic experts were interviewed until theoretical saturation was reached. Data were collected using a researcher-made questionnaire. The instrument's reliability was assessed using Cronbach's alpha, which yielded coefficients of 0.891 for the market economy scale and 0.717 for the field-of-study selection scale. Face and content validity were confirmed by a panel of experts. Qualitative data were analyzed using thematic analysis and coding techniques.

Results: The results of Pearson correlation and regression analyses indicated a significant relationship between the market economy and students' field-of-study selection. Among the examined variables, communication needs had the strongest effect on the role of the educational system in the selection process, with a regression coefficient of 0.350.

Conclusions: The findings suggest that the educational system should be revised to place greater emphasis on communication and management skills. Such reforms may help students make more informed decisions about their academic future in line with labor market demands.

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Introduction

In the Iranian educational system, the upper secondary school period represents a critical developmental stage where students' specialized talents emerge, their learning capacity reaches its peak, their curiosity becomes canalized toward specific domains, and they confront major life milestones, most notably the "field-of-study selection" (Ashouri et al., 2022). Deciding on an academic track during high school is one of the earliest and most decisive choices an individual makes (Niazi et al., 2018). Upon entering upper secondary education, students must select an academic branch that will ultimately shape their future career trajectories (Zabihi Jalali Zavareh et al., 2020). Consequently, the field-of-study selection process in the second cycle of secondary education is designed to guide students toward the most suitable academic tracks based on their talents, interests, resources, and the developmental needs of the country (Niazi & Soleimannejad, 2020). From an individual perspective, choosing an academic major is a pivotal life decision, whereas from the standpoint of the educational system and the labor market, it constitutes a vital socioeconomic process (Arshadi et al., 2020). Students often make this choice under the assumption that it will secure their professional future and enhance their quality of life. Conversely, an inappropriate choice not only leads to academic decline, lack of motivation, and school dropout, but also carries severe psychological and economic consequences (Ashouri et al., 2022).

The alignment between a student's chosen field of study and the prevailing dynamics of the labor market is one of the most complex economic issues in market studies (Arshadi et al., 2020). Over the past decade, a rapid increase in the supply of educated labor alongside a persistent educational mismatch with market needs has hindered the labor market's capacity to absorb university graduates. Ideally, a precise understanding of current and future labor market trends should guide candidates' choices and lead to education-job congruency. However, time lags (the temporal gap between selecting a major and entering the workforce) and fluctuating socioeconomic conditions frequently diminish this alignment (Arshadi et al., 2021). A key mechanism to bridge this gap is to equip students with the attitudes, skills, and competencies required to secure viable jobs in contemporary society (Hamed et al., 2023).

Empirical evidence indicates that current labor market conditions and students' perceptions of future job prospects heavily influence their academic choices. Specifically, students evaluate two

key employment-related variables: the density of the labor supply in their target profession, and their expected post-graduation earnings. The market structure, as perceived by the individual, dictates these decisions; hence, a student's capacity to process market information and anticipate labor absorption trends directly enhances their ability to make informed academic decisions (Arshadi et al., 2021). Selecting an academic major requires integrating three categories of information: personal abilities, the characteristics of available academic fields, and the alignment between these fields and future careers. The more realistic and accurate a student's understanding of these three factors, the more successful their academic decision-making will be.

Secondary schools must navigate a dual role that often introduces role conflict. They must serve both as a transitional pathway from school to the world of work and as a preparatory stage for higher education; balancing these two functions is essential (Navidi, 2017). Chapman (1981) posited that field-of-study selection is determined by an interaction between a candidate's internal characteristics and external influences. According to this model, internal factors include personal interest, aspirational level, attitudes, and prior academic performance, while external factors comprise significant others (family, peers, and counselors) as well as the location and quality of educational institutions (Tang & Seng, 2016). Similarly, Ahmad et al. (2017) characterized major selection as the turning point of specialized education because of its profound impact on a student's professional life, arguing that it should not be left to transient emotions, superficial imaginations, or naive optimism (Ebrahimi Moghaddam et al., 2017).

Socioeconomic status (SES) also plays a critical role in this decision-making process. SES serves not only as a predictor of higher education aspirations but also as a form of vocational orientation. Individuals from low-income backgrounds often select fields that maximize upward social mobility. Sullivan and Bodigan note that parents actively project the financial costs, institutional quality, academic major viability, and geographic location of higher education for their children during the final years of high school. A supportive family background boosts students' decision-making confidence, and parental encouragement is positively associated with entering higher education and securing a preferred field of study (Enayati Novin-Far et al., 2012).

Preparing youth for the labor market remains a fundamental challenge for educational systems (Waravan, 1998). Youth unemployment in Asian regions is substantially higher than adult unemployment, primarily due to a lack of cohesion between school curricula and the skill levels

required by employers (Oskouhi et al., 2012). As Swedberg (2012) argued, examining the market provides the conceptual tools needed to understand contemporary economic transitions. Sociologists must study historical and modern markets to clarify their roles in various societies and economies.

One of the most profound shifts in modern society is the colonization of the lifeworld by the hegemonic power of money and material considerations. Economic actions are “embedded” within social relations and ongoing transactions among actors (Granovetter, 1985, as cited in Amirpanahi, 2014). Market interactions do not occur in a vacuum; they develop within stable social networks. Economic institutions are constructed by mobilizing resources through these social networks (Granovetter & Swedberg, 1992). In this sense, economic action is fundamentally social, and economic institutions are social forms (Slater & Tonkiss, 2007). Consequently, when a market economy dominates the social structure, the society begins to be run as an adjunct to the market system. Instead of the economy being embedded in social relations, social relations become embedded in the economic system (Polanyi, 2012).

To align school curricula with the skill sets, competencies, and practical capabilities demanded by industry, various educational models reflecting differing economic, social, and cultural contexts have emerged. Skilbeck et al. categorized these approaches into three primary models:

Work-Oriented Model: Emphasized in Japan, this model prepares youth for the socio-economic system by focusing on training within actual work environments.

School-Oriented Model: Prevalent in the United States and the United Kingdom, this model places the primary responsibility of preparing students for the workforce on the formal school system.

Mixed (School/Work-Oriented) Model: Typified by Germany’s dual education system, this model posits that preparing youth for the labor market requires collaborative partnerships between the educational system, industrial sectors, and economic institutions (Azizi, 1998).

Recent empirical research corroborates these dynamics:

Subhrajyoti (2023) identified that a lack of self-awareness, insufficient information on academic majors, unclear career prospects, low literacy, and inadequate occupational data significantly hinder students’ career decision-making. Esposito and Scicchitano (2022) found that educational mismatches in Italy substantially raise individual unemployment risks. Choi (2021) showed that

vocational secondary education in South Korea, when followed by direct labor market entry, yields better job status and higher wages than academic paths, even after controlling for individual and family characteristics. Javed (2018) reported that student ability, prior knowledge, parental occupation, and financial status dictate secondary subject choices in Pakistan. Baker et al. (2017) demonstrated that while students across all majors hold distorted perceptions of market variables, a 1% increase in expected wages increases the likelihood of choosing a major by %1.5%, whereas a % increase in employment probability only raises the likelihood by 0.4%0.4\%0.4%. Giustinelli and Pavoni (2017) revealed that gender-based differences and family dynamics play a crucial role in reducing uncertainty during the major selection process in France. Davies and Qiu (2016) found that wage expectations drive academic choices in the United Kingdom, with students possessing higher cultural capital holding higher wage expectations. In Tajikistan, Khadem Masjedi and Norouzi (2016) demonstrated that parents who utilize information and communication technologies are better equipped to guide their children toward successful academic choices that yield better career placements.

In Iran, Shakurnia and Karami (2017) found that “expected income and career outlook” ($M=4.19$) and “academic ability and personal talent” ($M=4.08$) were the most influential factors driving pharmacy students’ choice of study, whereas “social status” was less influential ($M=3.73$).

Currently, there is a declining interest in the humanities and basic sciences (such as mathematics, physics, and chemistry) in Iran, despite the historical prestige of fields like engineering. The domestic economic climate makes it difficult for graduates in these fields—even at the doctoral level—to secure employment, leaving them with poor career prospects. Conversely, the aspiration to enter medicine, dentistry, and pharmacy to secure high incomes and social prestige has concentrated intense competition in the experimental sciences. Regrettably, the national educational system has contributed to this imbalance by neglecting the humanities and mathematics while disproportionately prioritizing other fields.

This study seeks to identify how the market economy influences the field-of-study selection of upper secondary students in Tehran. It aims to clarify the mechanisms through which economic and market-oriented attitudes dominate the cultural and social dynamics of education, and how this centrality of economic life impacts educational institutions during the academic selection process.

Accordingly, the primary research question is: How does the market economy affect the field-of-study selection of second-cycle secondary school students in Tehran?

Theoretical Model Presentation

To conceptualize these relationships, the theoretical model of the study is presented in figure 1.

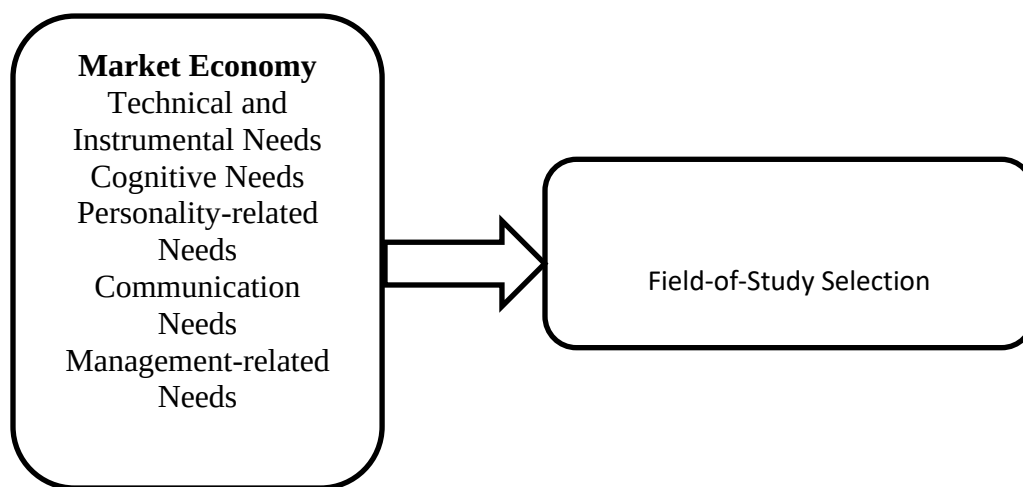


Figure 1. Theoretical framework of the study

Research Hypothesis

The market economy significantly influences the field-of-study selection of upper secondary school students in Tehran within the educational system.

Material and Methods

The present study employed a descriptive survey design. Data were collected using note-taking in the descriptive phase and a researcher-made questionnaire in the survey phase. To strengthen validity and enrich the findings, unstructured in-depth interviews were also conducted.

The statistical population of the study consisted of 67,158 male upper secondary school students enrolled in schools in Tehran during the 2021–2022 academic year. The sample size was estimated using Cochran's formula, and 383 participants were selected through multistage cluster sampling. In the qualitative phase, 8 education and economics specialists were selected through purposive sampling based on accessibility.

Before each interview, permission was obtained from participants to record the conversation, and the purpose of the study as well as the necessary ethical principles were explained to them. Participants were also informed about the confidentiality of their information. The interviews were conducted in a single session lasting between 30 and 45 minutes each, and continued until theoretical saturation was reached.

To assess the reliability of the instrument, Cronbach's alpha coefficient was used. The results indicated high reliability of the questionnaire, with alpha coefficients of 0.891 for the market economy scale and 0.717 for the field-of-study selection scale. The face and content validity of the questionnaire were also evaluated by experts.

Data were analyzed using SPSS version 23. Descriptive statistics were used to summarize the data, and inferential statistics were applied after assessing the normality of the data distribution through the Kolmogorov-Smirnov test. Pearson's correlation coefficient and regression analysis were used to explain the quantitative findings, while thematic analysis was employed to analyze the qualitative data.

Results

Table 1. Frequency Distribution of Respondents by Age

Age (years)	Frequency	Percentage
15	6	1.6
16	118	30.8
17	199	52.0
18	60	15.7
Total	383	100.0

As shown in Table 1, the largest proportion of respondents were 17 years old (52.0%), followed by those aged 16 (30.8%). The smallest proportion of respondents were 15 years old (1.6%).

Table 2. Frequency Distribution of Respondents by Grade Level

Grade level	Frequency	Percentage
Grade 10	92	24.0
Grade 11	188	49.1
Grade 12	103	26.9
Total	383	100.0

As indicated in Table 2, 49.1% of the respondents were in Grade 11, 26.9% were in Grade 12, and 24.0% were in Grade 10.

Table 3. Frequency Distribution of Respondents by Field of Study

Field of study	Frequency	Percentage
Mathematics and Physics	87	22.7
Experimental Sciences	121	31.6
Humanities	76	19.8
Accounting	41	10.7
Computer Studies	29	7.6
Graphic Design	29	7.6
Total	383	100.0

As shown in Table 3, 31.6% of the respondents were studying Experimental Sciences, 22.7% Mathematics and Physics, 19.8% Humanities, 10.7% Accounting, 7.6% Computer Studies, and 7.6% Graphic Design. Thus, Experimental Sciences was the most common field of study among the respondents.

Table 4. Descriptive Statistics for the Market Economy Variable and Its Components

Variable	Minimum	Maximum	Mean	Standard deviation
Technical and Instrumental Needs	11	40	31.12	4.92
Cognitive Needs	9	30	22.20	4.79
Personality Needs	10	30	21.60	4.60
Communication Needs	24	40	33.75	3.23
Managerial Needs	20	35	29.42	2.90
Market Economy	100	173	138.11	13.90

According to the descriptive statistics presented in Table 4, the mean score for the market economy variable was 138.11, with a standard deviation of 13.90. The mean scores for the market economy components—Technical and Instrumental Needs, Cognitive Needs, Personality Needs, Communication Needs, and Managerial Needs—were reported to be higher than their respective standardized reference values. These findings indicate that the respondents' scores on the market economy construct and its components were at an acceptable level.

Based on the reported mean scores, the components were ranked from highest to lowest as follows:

1. Communication Needs
2. Technical and Instrumental Needs
3. Managerial Needs
4. Cognitive Needs
5. Personality Needs

Because these components appear to contain different numbers of items and have different possible score ranges, comparisons based solely on their raw means should be interpreted cautiously. Mean

scores per item or standardized scores would provide a more accurate basis for ranking the components.

Table 5. Descriptive Statistics for Field-of-Study Selection

Variable	Minimum	Maximum	Mean	Standard deviation
Field-of-Study Selection	49	86	72.71	6.55

According to Table 5, the mean score for field-of-study selection was 72.71, with a standard deviation of 6.55. This mean was reported to be higher than the standardized reference value, indicating an acceptable level of field-of-study selection among the students.

Assessment of Normality

Table 6. Results of the Kolmogorov–Smirnov Test for the Study Variables

Variable	Kolmogorov–Smirnov statistic	<i>p</i>
Technical and Instrumental Needs	0.993	.070
Cognitive Needs	0.083	.061
Personality Needs	0.049	.051
Communication Needs	0.147	.071
Managerial Needs	0.075	.062
Market Economy	0.020	.200
Field-of-Study Selection	0.040	.191

As shown in Table 6, the significance levels for all study variables were greater than .05. Therefore, the distributions of the variables were considered approximately normal, and parametric statistical tests were used to examine the research hypothesis.

Inferential Findings

The research hypothesis stated that: The market economy influences the field-of-study selection of upper secondary school students in Tehran.

Table 7. Pearson Correlation Matrix for the Market Economy, Its Components, and Field-of-Study Selection

Variable	1	2	3	4	5	6	7
1. Technical and Instrumental Needs	1						
2. Cognitive Needs	.497**	1					
3. Personality Needs	.364**	.389**	1				
4. Communication Needs	.274**	.344**	.292**	1			
5. Managerial Needs	.171**	.222**	.160**	.458**	1		
6. Market Economy	.735**	.767**	.698**	.626**	.489**	1	
7. Field-of-Study Selection	.064	-.006	-.008	.342**	.271**	.167**	1

** = $P < 0.001$

According to the results presented in Table 7, Technical and Instrumental Needs were not significantly associated with field-of-study selection, $r=.064$, $p = .211$. Cognitive Needs also showed no significant relationship with field-of-study selection, $r=-.006$, $p=.903$, nor did Personality Needs, $r=-.008$, $p=.875$. Therefore, these three components were not significantly related to students' field-of-study selection.

By contrast, Communication Needs had a statistically significant positive relationship with field-of-study selection, $r=.342$, $p<.001$. Managerial Needs were also positively and significantly correlated with field-of-study selection, $r=.271$, $p<.001$. Furthermore, the overall Market Economy score showed a statistically significant positive relationship with field-of-study selection, $r=.167$, $p=.001$. These findings suggest that higher scores on Communication Needs, Managerial Needs, and the overall Market Economy construct were associated with higher field-of-study selection scores among upper secondary school students in Tehran.

Multiple Regression Analysis

Table 8. Model Summary for the Regression Analysis

Multiple R	R ²	Adjusted R ²	Standard error of the estimate
.467	.218	.208	7.60770

As indicated in Table 8, the multiple correlation coefficient between the predictors and the dependent variable was $R=.467$. The coefficient of determination was $R^2=.218$, while the adjusted coefficient of determination was $\text{Adjusted } R^2=.208$. Thus, the predictors included in the regression model collectively explained approximately 21.8% of the variance in students' field-of-study selection.

Table 9. Analysis of Variance for the Regression Model

Source	SS	DF	MS	F	p
Regression	6,090.664	5	1,218.133	21.047	< .001
Residual	21,819.655	377	57.877		
Total	27,910.319	382			

The ANOVA results presented in Table 9 indicate that the regression model was statistically significant, $F_{5, 377}=21.047$, $p<.001$. Therefore, the predictor variables, taken together, significantly predicted students' field-of-study selection.

Table 10. Regression Coefficients Predicting Field-of-Study Selection

Predictor	B	Standard error	B	T value	P
Constant	31.451	4.923	—	6.389	< .001
Technical and Instrumental Needs	0.138	0.089	.080	1.558	.120
Cognitive Needs	-0.404	0.157	-.227	-2.581	.010
Personality Needs	-0.233	0.143	-.126	-1.627	.104
Communication Needs	0.925	0.175	.350	5.291	< .001
Managerial Needs	0.433	0.179	.147	2.414	.016
Market Economy	0.104	0.091	-.169	1.138	.001

According to Table 10, Cognitive Needs significantly and negatively predicted field-of-study selection, $B=-0.404$, $\beta=-.227$, $t=-2.581$. Communication Needs were a significant positive predictor, $B=0.925$, $\beta=.350$, $t=5.291$, $p<.001$, and Managerial Needs also had a significant positive effect, $B=0.433$, $\beta=.147$, $t=2.414$, $p=.016$.

Technical and Instrumental Needs did not significantly predict field-of-study selection, $B=0.138$, $t=1.558$. Similarly, Personality Needs were not a statistically significant predictor, $B=-0.233$, $\beta=-.126$, $t=-1.627$, $p=.104$. Among the predictors, Communication Needs had the largest standardized regression coefficient, $\beta=.350$, indicating that it was the strongest predictor of field-of-study selection in the estimated model.

Interviews Conducted with Experts in Education and the Market Economy

Table 11. Interviews Conducted with Experts in Education and the Market Economy

Interviewee	Gender	Expert Group	Age	Field of Study	Occupation	Work Experience
Interviewee 1	Male	Market economy experts	61	Electronics	Oil dealership representative	30 years
Interviewee 2	Male	Market economy experts	48	Chemical Engineering, Petroleum track	Swiss watch importer	20 years
Interviewee 3	Female	Education experts	49	Counseling	Academic counseling in schools	25 years
Interviewee 4	Female	Market economy experts	59	Theology	Salesperson of household appliances	7 years
Interviewee 5	Female	Education experts	51	Chemistry	Teacher	25 years
Interviewee 6	Male	—	37	Law	Teaching in the cultural field	5 years
Interviewee 7	Male	Market economy experts	53	Technical and Vocational School	Household appliance repair	25 years
Interviewee 8	Female	Education experts	42	Biology	Teacher	17 years

What are the most important effects of technical and instrumental needs in the market economy on secondary school students' field-of-study selection?

Interviewee 1: Given the labor market's need for practical and technical skills, students tend to move toward technical and vocational fields such as information technology, mechanics, electricity, and so on. This leads to an increase in the number of skilled people in these areas.

Interviewee 2: Students may choose fields that place greater emphasis on practical and applied skills so that after graduation they can enter the labor market more quickly.

Interviewee 3: As I said, its effect can meet their survival needs, their need to play an effective role in the labor market and the economy of society, and it can directly affect production, entrepreneurship, and meeting the needs of society, as well as their own needs and those of their families.

Interviewee 4: Most students study in vocational schools so that, God willing, there will be a job market and they can reach a place of progress and choose a profession.

Interviewee 5: If field selection is done consciously and based on personal interest, then those who determine these fields in different schools should specify the number of students based on the needs of society. For example, there should not suddenly be an influx of graduates in one field into society, or a job that must be repeated too much. It should be based on the needs of society, and students should also take interest questionnaires. For example, if one student studies accounting and another studies mobile phone repair, both interest and needs assessment can complement each other.

Interviewee 6: Factors such as skill development, trainees' familiarity with the production process, familiarity with decision-making skills and implementing those decisions, and trainees' knowledge of the product classification process were mentioned.

Interviewee 7: The labor market usually absorbs graduates of technical and vocational fields better.

Interviewee 8: Students are becoming increasingly aware of the skills required by the labor market. This awareness can affect their field-of-study selection and guide them toward education that matches occupational needs.

What are the most important effects of cognitive needs in the market economy on secondary school students' field-of-study selection?

Interviewee 1: One factor that can affect field selection is students' awareness of the current and future needs of the labor market. Students who have sufficient information about in-demand occupations and the skills required for them are more likely to choose appropriate fields.

Interviewee 2: By having a proper understanding of themselves and recognizing their personal interests and talents, students will be able to choose fields that match their individual characteristics, and this increases their future success.

Interviewee 3: Students' cognitive needs, based on the interest and talent that exists within them and through the tests they take, can help them continue their studies in fields such as mechanics, architecture, and others, and this has an effective role in field selection.

Interviewee 4: It definitely has a direct effect. Choosing an appropriate field based on awareness and understanding increases the likelihood of academic success. Students who choose fields consistent with cognitive needs and the market are more likely to succeed in their studies and future careers.

Interviewee 5: Certainly, they can choose their field with greater knowledge, meaning that based on their personal circumstances they gain self-knowledge and also knowledge about the field offered, and they can easily choose a good field.

Interviewee 6: Familiarity and understanding of work processes and awareness of potential capabilities and capacities were mentioned.

Interviewee 7: Families do not pay attention to the field in which their children want to progress, nor whether they have the necessary ability in that field. At one point they think they have the capacity for that field, but after a while they become discouraged.

Interviewee 8: Awareness of the labor market and its needs can increase students' motivation to learn and continue their education. By understanding the importance of education and skills that match the market, they become more inclined to enter related academic fields.

What are the most important effects of personality needs in the market economy on secondary school students' field-of-study selection?

Interviewee 1: Personality needs can have a direct effect on the tendency toward certain fields. For example, social personalities are more inclined to choose fields related to social sciences and humanities, while analytical personalities may be drawn to engineering and science fields.

Interviewee 2: Decision-making skills, in relation to personality needs such as analyzing situations and making better choices based on information, can affect field selection. Students who are better able to analyze conditions and market needs are more likely to choose more successful fields.

Interviewee 3: Students choose based on their personality. For example, a student whose dominant personality is investigative may choose fields in engineering sciences, such as research, inquiry, or laboratory sciences. Or a student whose dominant personality is social usually chooses fields like the humanities, where there is more interaction with people and where they can communicate. It depends on which personality trait is more dominant.

Interviewee 4: They should be creative and have high self-confidence.

Interviewee 5: The more students become aware of themselves—that is, the more self-knowledge becomes evident to them—the more likely they are to choose a field in which they see their own capabilities, and based on labor market needs they choose accordingly. This definitely has a positive effect on the economy.

Interviewee 6: Self-confidence and having the courage to act.

Interviewee 7: Fear dominates them so much and they do not have confidence; they cannot enter the labor market. They definitely need self-confidence in order to progress. A student can test themselves among other students and see whether they are collaborative and able to interact in harmony with others, which are traits that can be useful in the labor market.

Interviewee 8: High self-confidence can help students make bolder choices and move toward fields that may be challenging. This confidence allows them to act more decisively in their academic choices.

What are the most important effects of communication needs in the market economy on secondary school students' field-of-study selection?

Interviewee 3: It can have a direct effect on field selection.

Interviewee 5: Special attention to communication needs leads to a more correct field selection. That is, as students gain self-knowledge and form relationships with those around them, they connect with people who are aligned with them, and this affects their field choice. It directs their interests toward selecting a more suitable field.

Interviewee 6: Creating interaction with others, as well as developing group skills.

Interviewee 7: Increasing their capacity for influence and boosting their own capabilities, as well as their ability to influence those they work with. The ability of trainees and negotiation skills are important.

What are the most important effects of managerial needs in the market economy on secondary school students' field-of-study selection?

Interviewee 3: Given the recognition of obstacles, limitations, and shortcomings in the work environment, and the analysis and management of them, or an individual's ability to plan and make appropriate decisions, this can have a major effect on students' field selection or even on dropping out.

Interviewee 4: First, they should understand the economy, culture, and current social issues; this is effective in advancing the work of society.

Interviewee 5: Certainly, a person who can manage themselves well can also choose a good field. In fact, many students have pursued their field selection all the way to the doctoral level, but because they could not manage themselves and were forced by the opinions of others, they followed that path and encountered problems in field selection. However, if a person has met their cognitive needs at the right time and has developed good metacognition about themselves, they can easily manage their field selection.

Interviewee 6: Having insight and the ability to understand goals, as well as the ability to plan and make appropriate decisions.

Interviewee 7: One must have insight and the ability to know what they want to do and what goal they are pursuing; they must understand the limitations and shortcomings of the work environment and be able to analyze and manage them.

Interviewee 8: Students who have managerial skills have the ability to analyze the market and identify fields that are more aligned with future occupational needs. These skills help them make more informed decisions in field selection.

Table 12. Interview Analysis (Technical and Instrumental Needs) of Experts in the Market Economy and Education

Overarching Theme	Organizing Theme	Basic Theme	Interviewee Codes
Technical and instrumental needs	Tendency toward technical and skilled fields	Increased tendency of students toward technical and vocational fields; choosing fields related to information technology, electricity, mechanics, and applied skills; better absorption of technical fields in the labor market; attention to skill development for faster entry into employment	1, 2, 7
Technical and instrumental needs	Employability and rapid entry into the labor market	Acquiring skills for quick employment after graduation; increasing the chance of finding a job; choosing a field with the goal of job security and income; readiness to play an economic role in society	2, 3, 4, 7
Technical and instrumental needs	Responding to the economic needs of the individual and society	Meeting the livelihood needs of the individual and family; contributing to production and entrepreneurship; responding to societal needs; training human resources suited to the economy of society	3, 4, 5
Technical and instrumental needs	The necessity of conscious educational guidance and market needs assessment	Choosing a field based on interest and inclination; using interest questionnaires; considering social needs when determining field capacity; preventing saturation in some fields	5
Technical and instrumental needs	Development of practical skills and decision-making	Developing technical and practical skills; familiarization with the production process; strengthening decision-making and implementation skills; familiarity with work processes and product classification	6
Technical and instrumental needs	Increasing students' awareness of labor market needs	Understanding the skills required by the labor market; increasing students' occupational awareness; choosing education in line with job opportunities	8

The findings of Table 12 show that the technical and instrumental needs of the market economy play an important role in directing students' field-of-study choices. The most important effect of these needs is the increased tendency toward skill-based and technical fields, because students and families see these fields as a way to gain faster employment, job security, and economic stability. The results also indicate the importance of conscious educational guidance, labor market needs assessment, and paying simultaneous attention to individual interest and social needs in the field-selection process.

Table 13. Interview Analysis (Cognitive Needs) of Experts in the Market Economy and Education

Overarching Theme	Organizing Theme	Basic Theme	Interviewee Codes
Cognitive needs	Environmental awareness (labor market)	Awareness of in-demand occupations; understanding the required skills; analyzing work processes; the necessity of matching education with the labor market	1, 4, 6, 8
Cognitive needs	Individual awareness (self-knowledge)	Understanding interests and talents; use of aptitude tests; recognizing capacities and potential abilities; self-awareness	2, 3, 5, 6
Cognitive needs	Alignment and harmonization	Choosing a field based on the fit between the individual and labor market needs; increasing the likelihood of academic and occupational success	4, 5
Cognitive needs	Intervening factors (challenges)	The role of family in awareness; the risk of discouragement due to wrong choices; insufficient attention in assessing abilities	7
Cognitive needs	Psychological outcomes	Increased motivation, reduced discouragement, and greater academic and occupational success	4, 7, 8

The findings of Table 13 show that cognitive needs play an important role in students' field-of-study selection. The most important component of these needs is students' awareness of their abilities, interests, and talents alongside knowledge of labor market needs. This awareness enables students to make more informed choices that are better aligned with their personal characteristics and job opportunities. In addition, the use of aptitude tests and increased awareness of future occupational prospects raise the likelihood of academic and professional success and prevent future discouragement and dissatisfaction. Moreover, awareness of the importance of skills and labor market needs strengthens students' motivation to learn and continue their education.

Table 14. Interview Analysis (Personality Needs) of Experts in the Market Economy and Education

Overarching Theme	Organizing Theme	Basic Theme	Interviewee Codes
Personality needs	Effect of personality traits on field suitability	Students tend to gravitate toward certain fields based on their personality type. Social personalities are more attracted to the humanities, while analytical or investigative personalities are more inclined toward technical, engineering, and research fields	1, 3
Personality needs	The role of self-knowledge and decision-making skills in choosing a field aligned with the labor market	Students who have greater awareness of their abilities and market conditions make more successful and more economically sound choices	2, 5
Personality needs	Self-confidence and courage as a factor in success in field selection and entering the labor market	High self-confidence enables students to make bolder choices, not fear challenges, and see themselves as capable of entering the labor market	4, 6, 7, 8
Personality needs	The importance of social skills and creativity in occupational success	Social interaction, willingness to cooperate, and creativity are characteristics that can play an effective role in field selection and future economic success	4, 7

The findings of Table 14 show that field selection is not based solely on interest or academic ability, but that students' personality needs and psychological characteristics play a decisive role in this process. Individuals with greater self-knowledge, self-confidence, and decision-making skills choose fields that are both more consistent with their personality traits and more aligned with labor market needs. Social skills and creativity can also strengthen students' future occupational and economic success.

Table 15. Interview Analysis (Communication Needs) of Experts in the Market Economy and Education

Overarching Theme	Organizing Theme	Basic Theme	Interviewee Codes
Communication needs	Determining role of communication	Direct effect of communication on field selection	3
Communication needs	Interactive self-knowledge and direction of choice	Gaining self-knowledge through interaction with others and those around them; aligning one's career path with like-minded and related people (networking)	5
Communication needs	Development of soft and interactive skills	Strengthening teamwork and interpersonal interaction; learning negotiation and persuasion skills	6, 7
Communication needs	Increasing social capital and influence	Increasing the ability to influence others (customers, colleagues, etc.); increasing responsiveness and effective mutual acceptance in the workplace	7

The findings of Table 15 show that communication with others is not merely an external act, but rather a “mirror.” In the market economy, the student discovers strengths and weaknesses through communication with like-minded people. In fact, field selection changes from an individual act into a consultative and interactive process. According to the interviewees, especially 6 and 7, field selection in today's world should be directed toward gaining skills that are in high demand in the labor market; that is, “soft skills.” Interviewee 7 clearly shows that communication needs in the market economy are tied to “power.” A person must be able to influence their surrounding environment, whether by persuading customers, colleagues, or employers. In this view, field selection is a kind of investment in gaining future influence and power.

Table 16. Interview Analysis (Managerial Needs) of Experts in the Market Economy and Education

Overarching Theme	Organizing Theme	Basic Theme	Interviewee Codes
Managerial needs	Self-management and strategic self-knowledge (individual)	Control over one's personal path, metacognition, independence in decision-making, resistance to pressure from others	5, 6
Managerial needs	Environmental analysis and realistic understanding (economic)	Recognizing obstacles, understanding the economy and culture of society, identifying the shortcomings of the labor market	3, 4, 7, 8
Managerial needs	Executable capabilities and goal setting (technical)	Ability to plan, insight into long-term goals, matching skills with future occupational needs	3, 6, 7

The findings of Table 14 show that in the market economy, “field selection” has shifted from a merely educational decision to a form of “life and career management.” Managerial skills enable students to move from passive decision-making, influenced by others or by the social atmosphere, toward active decision-making based on market analysis and self-knowledge. The direct result of this is greater stability in education and success in the future labor market.

Discussion

The primary objective of this study was to investigate the impact of the market economy on the field-of-study selection among secondary school students in Tehran. The process of selecting an academic major requires students to make decisions based on an informed understanding of their own interests and abilities, existing educational facilities, and the alignment between available societal occupations and specific academic disciplines. In this context, it is essential that students are provided with the necessary information to make informed choices. An inappropriate field selection can lead to a decline in the country's scientific standing, the depletion of economic and human resources, and a lack of motivation or indifference toward individual and social issues (Niazi & Soleiman-Nezhad, 2020). One of the most significant challenges in Iran's labor market is the phenomenon of "education-job mismatch," reflected as a lack of alignment between the educated workforce and the labor requirements of various occupations (Dortoumi et al., 2017). As explained, one of the critical issues with a bidirectional relationship with the labor market is students' field selection, which impacts their career growth trajectory and, consequently, creates lags in the labor market (Arshadi et al., 2021).

The findings indicated that the market economy has a significant impact on the secondary educational system regarding students' field selection. Furthermore, the "Communication Needs" variable, with a regression coefficient of 0.350, had the highest impact on the educational system's role in field selection. These findings are consistent with the studies of Baker et al. (2017) and Davis & Tian Ko (2016). These results can be interpreted through Chapman's perspective, where field selection is viewed as an interaction between a student's internal characteristics and external environmental factors. Therefore, field selection occurs based on the synergy of internal factors—including interest, aspiration levels, attitudes, abilities, and academic performance—and external factors, such as "significant others" (family members and friends) and the characteristics of the educational institution. Consequently, the educational system should not be viewed merely as a production process where the economy dictates the direction of education; rather, education—grounded in human values—must influence the market economy and guide it in an effective and valuable manner.

Based on interviews with experts in education and the market economy, several key conclusions were drawn regarding the impact of technical, cognitive, personality, communication, and

managerial needs on student choices. Technical and instrumental needs directly influence field selection. Many interviewees emphasized that students are gravitating toward technical and vocational disciplines to enter the labor market more quickly. This shift in attitude stems from economic pressures and the necessity of earning an income alongside their studies. Specifically, fields such as mechanics, electricity, and Information Technology (IT) have received more attention due to real-world labor market demands. This suggests that the educational system must be designed to meet market needs and prepare students for employment.

Cognitive needs also play a vital role. Experts highlighted the importance of labor market awareness and self-knowledge regarding personal interests and talents. Students who are aware of market demands and recognize their own capabilities are more likely to select appropriate fields and succeed academically. This understanding helps them determine their career path through proper goal setting and planning. Similarly, personality needs emerged as an influential factor. Interviewees noted that individual personality traits affect the inclination toward specific fields. For instance, students with social personalities tend toward social sciences and humanities, while analytical personalities may choose engineering or science. This underscores the importance of considering personality traits in the academic and career guidance process.

Furthermore, communication needs within the market economy help students identify aligned networks, leading to a correct understanding of their own interests and strengths. In a market economy, theoretical knowledge alone is insufficient; success requires learning skills reinforced through communication. Students with stronger communication needs gravitate toward fields that enhance these capabilities. Thus, “communication needs” transform field selection from a static, individual decision into a dynamic social process. Finally, managerial needs influence choice through the ability to plan and make correct decisions. Students capable of managing their time and resources are more likely to succeed. Understanding the constraints of the work environment and managing them helps students make better decisions. While entering the labor market was once easier for secondary graduates, today’s students face challenges beyond mere technical training; they require higher levels of scientific knowledge and “soft skills.” This evolution necessitates a bridge between curriculum content and future job opportunities, a link increasingly sought by schools and employers in advanced societies.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving human participants were reviewed and approved by the ethics committee of Islamic Azad University. The patients/participants provided their written informed consent to participate in this study.

Author contributions

All authors contributed to the study conception and design, material preparation, data collection, and analysis. All authors contributed to the article and approved the submitted version.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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