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Original Article

Drivers of Land Commodification in the Western Urban–Rural Areas of Guilan Province, Northern Iran

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Abstract

Purpose- Land commodification is a process through which land shifts from being a productive, ecological, and social resource to a speculative asset and a vehicle for capital accumulation. Over the past decade, this process has intensified across the urban and rural zones of western Gilan Province, resulting in widespread villa construction, unregulated land-use conversions, increasing pressure on agricultural lands, spatial fragmentation, and the weakening of rural development. Despite the significance of this phenomenon, previous studies have rarely undertaken a systematic identification of the *key driving forces* shaping this complex dynamic.

Design/methodology/approach- Addressing this gap, the present study first identified a broad set of factors influencing land commodification through semi-structured interviews with local experts, managers, and stakeholders (145 participants). Following a screening and consensus-building process with 10 spatial-planning specialists, 59 final variables were extracted and subjected to structural analysis using a cross-impact matrix in MICMAC software. In addition, survey data from 300 local residents were employed to capture lived experiences, validate the operational mechanisms, and complement the analytical outcomes.

Finding- MICMAC results reveal that the absence of deterrent regulations and effective oversight mechanisms, weak agricultural support policies, fragmented land governance, the expansion of non-strategic tourism, and the increasing attractiveness of converting liquidity into land function as the principal driving variables. These drivers reinforce a self-amplifying cycle—characterized by rising land prices, intensified speculation, withdrawal of agricultural lands from production, and rapid villa development—that ultimately fosters spatial instability and undermines rural development.

Originality/value– By mapping the causal structure and identifying the key drivers, this study provides an evidence-based foundation for targeted policy interventions aimed at regulating land commodification and enhancing spatial–rural sustainability in western Gilan.

Keywords: Key driving forces, Land commodification, Western Guilan region, Land sales, MICMAC.

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1. Introduction

Land is a multidimensional concept that embodies environmental, economic, social, and even symbolic functions, each shaped according to human needs and objectives. Across cultures and intellectual traditions, land has held such significance that in many societies it has been regarded as a sacred entity or a supervising deity (Renne, 1958; Barlowe, 1986; Randall & Castle, 1985; Daly & Cobb, 1991; Van Vliet, 2016; Hersperger et al., 2018). In the humanities and social sciences as well, land—considered the foundation of all human activity—has been subject to extensive conceptual classifications and diverse theoretical perspectives (Henderson, 2017).

In recent decades, the "land market" has emerged as one of the most influential mechanisms shaping land use and land value, drawing considerable analytical attention in economics, geography, and spatial planning (Haila, 1991; Aspinall & Hill, 2008). As a primary human asset and a key component of national development, land functions in buying, selling, and leasing activities that create an active and complex market system. However, misallocation or inappropriate use of land can generate extensive consequences for its other essential and irreplaceable functions (Mousavi & Yazdani, 2015).

In Iran—as in many developing countries—factors such as population growth, rising land prices, inflation, water scarcity, and increased residential demand have accelerated the conversion of agricultural lands and green spaces into residential and commercial uses (Mahmoudzadeh, 2017). Coupled with migration, urban expansion, the absorption of villages into urban structures, and the unchecked growth of settlements, these processes have led to the degradation of orchards, shortages of public spaces, and increasing spatial disorder in rural landscapes.

Land-use change is a dynamic and complex phenomenon shaped by an interconnected network of biophysical and socio-economic forces (Koomen et al., 2007; Briassoulis, 2020; Kolhe et al., 2016; Walker, 2004; Rimal, 2011). Within this context, *driving forces* and *adaptive approaches* constitute two of the most prominent analytical frameworks for understanding land-change processes. Rooted in geographical scholarship, driving forces seek to explain human–environment interactions through concepts related to landscape transformation. However, the nature and intensity of these forces vary across regions, influenced by factors such as population characteristics, policy regimes, landforms, and resource availability. Moreover, driving forces typically operate in interconnected ways, making it difficult to understand them without analyzing their internal systemic relationships.

Given the complexity of this system and the instabilities arising from it, futures-oriented approaches have gained importance for identifying uncertainties and strengthening spatial planning (Zali, 2014). Although foresight studies complement strategic planning, structural analysis tools such as MICMAC primarily focus on identifying influential and dependent variables under current conditions, thereby creating the groundwork for constructing future scenarios.

In western Gilan, a combination of economic, social, and institutional factors has accelerated land commodification—a process that has manifested in widespread villa construction, the withdrawal of agricultural lands from production, declining rural economic resilience, and extensive transformations in settlement spatial structures. Despite the significance of this trend, few studies have systematically and causally examined the driving forces behind land commodification in this region.

Accordingly, the objective of the present study is to identify and explain the key driving forces shaping land commodification across the urban–rural zones of western Gilan and to provide a structural representation of the relationships among influential variables over a 30-year period. Such an analysis offers a foundation for managing and mitigating unsustainable trends and guiding spatial policy-making at regional and provincial scales.

2. Research Theoretical Literature

In recent years, the international literature has increasingly identified rural land commodification as one of the fundamental processes transforming rural and peri-urban spaces. In a study conducted in rural areas of Shijiazhuang, China, Fu and Sanada (2023) categorized this phenomenon into four pathways, including the commodification of agricultural lands (production- or tourism-oriented), residential plots, and construction land. They argue that land commodification results from the penetration of capital logic into rural spaces. Their findings show that population density, economic development level, agricultural production capacity,

and locational conditions are among the most significant driving forces behind this trend. Moreover, in the absence of policy intervention, land commodification may lead to polarization, land-use homogenization, and heightened land insecurity for vulnerable rural households. These results are consistent with recent research highlighting the role of land markets, tourism investment, and state policies in intensifying market-oriented transformations in rural areas.

In the broader field of land-use change, studies over the past five years have emphasized the interconnected effects of natural, social, economic, and political factors. Wu et al. (2022), examining Chongqing through geographic detectors and a combined ANN–CA model, demonstrate that land-use changes result from the simultaneous influence of variables such as population, distance from the city center, school density, GDP, and transportation networks. Similarly, Shoja et al. (2025), in a study on Tehran Province using Landsat imagery and the TerrSet platform, identify vegetation decline and expansion of built-up areas over the past two decades as major outcomes of human pressure and land-use policies. Collectively, this body of research highlights not only the value of remote sensing and dynamic modeling but also the critical importance of institutional and policy-related drivers.

In Iran, only a limited number of studies have directly examined the relationship between land commodification and rural development. Afrakhteh and Rahimi Pour Sheikhani Nejad (2020), in a study conducted in eastern Guilan, demonstrated that land-use change results from a complex interplay of ecological, social, economic, and political factors. The findings of other domestic studies confirm this pattern. For example, Kalali Moghaddam (2015) showed that in the rural areas of Rasht, residential demand pressures, declining agricultural profitability, and the absence of effective monitoring are among the main drivers pushing agricultural lands toward conversion and withdrawal from production. Similarly, Darban-e-Astaneh (2016), in an investigation of rural areas in Mahmoudabad, found that institutional deficiencies, weak agricultural support policies, and the economic constraints of rural households have intensified land sales and the expansion of non-agricultural uses. Taken together with evidence from eastern Guilan, these findings indicate that the combination of economic pressures, weak land governance, and regulatory gaps constitutes one of the principal engines behind rural land commodification in the country.

A synthesis of the literature from the past five years suggests that while many studies have analyzed land commodification through market-oriented lenses, few have structurally examined the causal relationships among driving forces, and most have not differentiated between the various forms of commodification (e.g., agriculture-driven, tourism-driven, housing-driven, etc.). Moreover, despite the severity of land commodification across the urban–rural zones of western Guilan, no research has yet employed structural analytical approaches such as MICMAC to identify the key drivers and the network of interrelationships among them. Building on the latest studies (Fu & Sanada, 2023; Wu et al., 2022; Afrakhteh & Rahimi Pour, 2020; Shoja et al., 2025), the present research seeks to fill this gap by identifying the fundamental driving forces of land commodification and explaining its implications for rural development and territorial security in western Guilan.

3. Methodology and Study area

3.1 Geographical Scope of the Research

The study area encompasses the urban and rural zones of the western–central part of Guilan Province, covering the counties of Shaft, Fuman, Masal, Rezvanshahr, Talesh, and Astara (Figure 1). This region is bounded to the north by the Caspian Sea and the border of the Republic of Azerbaijan, to the south by the western Alborz highlands, to the east by Rasht and Sowme'eh Sara counties, and to the west by Ardabil Province. The climatic and topographic diversity of the area—from fertile alluvial plains to forested foothills and highland pastures—makes it one of the richest bio-climatic and spatial units in northern Iran.

The regional economy is based on a combination of agriculture (rice paddies, tea and citrus orchards), livestock husbandry, forestry, and nature–culture-based tourism. Attractions such as Rudkhan Castle, Masuleh, Olsabelangah, the Meryan and Agh-Olar highlands, and the Talysh–Astara coastal belt have made the region one of the most important tourism destinations in northern Iran. Proximity to the metropolitan area of Rasht and convenient access to transportation networks have significantly increased residential and tourism-driven demand in recent years.

The simultaneous presence of high ecological sensitivity, valuable agricultural lands, Hyrcanian forests, and intense investment-driven demand has exposed western Guilan to accelerating land commodification, widespread villa construction, agricultural land conversion, and the withdrawal of land from productive use. The complexity of settlement patterns, the dispersed rural–urban system, and the strategic position of the region within the provincial settlement network have turned this area into a focal point of spatial transformations and land commodification in northern Iran—highlighting the urgent need for a structural analysis of the driving forces shaping these trends.

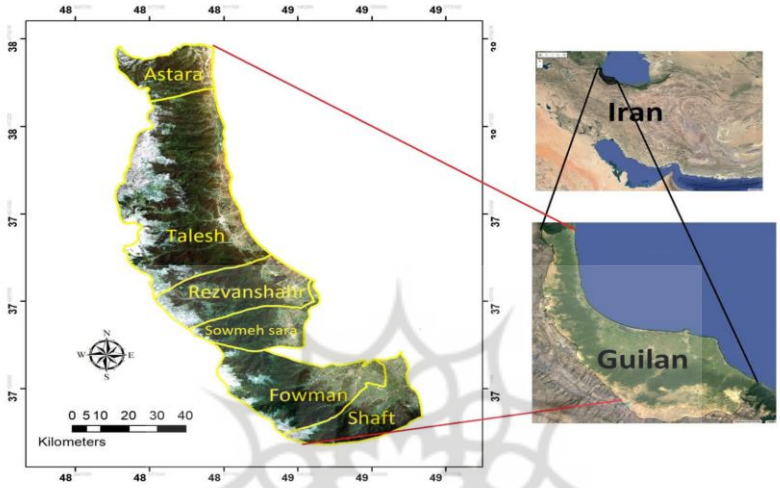

Figure 1. Map of the study area

3.2. Methodology

This study is applied in nature and follows a descriptive–analytical design. To examine the relationships among the factors influencing land commodification in the urban–rural zones of western Guilan Province, a mixed-methods approach (qualitative–quantitative) was employed, utilizing the MICMAC-based structural analysis method. The research process was organized into four main stages.

In the first stage, aiming for a comprehensive identification of the dimensions and components shaping land commodification, the qualitative phase of the study was conducted through semi-structured interviews with managers and experts of relevant governmental institutions, local planners, council members, and community leaders. Participants were selected using purposive and snowball sampling, resulting in a total of 145 interviewees. The collected data were analyzed using the Colaizzi method, through which 101 initial variables were extracted and categorized into four domains: institutional–managerial, economic–market, social–demographic, and environmental–spatial factors.

In the second stage, the list of extracted variables was submitted to 10 experts in the fields of spatial planning, land economics, human geography, and land governance for evaluation, consolidation, elimination of redundancies, and prioritization. The specialists assessed the variables based on three criteria: their level of influence on land commodification, their frequency across interviews, and their suitability for structural analysis. As a result, 59 final variables were selected to form the basis of the structural analysis. The complete list of these 59 variables (coded A1 to A59) is presented in Table 1.

Table 1 :Driving and Key Variables Influencing Land Commodification Variables Entered into MICMAC Software

Variable Entered into MICMAC	MICMAC Code	Variable Entered into MICMAC	MICMAC Code
Severe currency fluctuations	A1	Dominance of single-crop livelihood systems	A36
Low bank interest rates	A2	Profit-seeking behavior (sellers–buyers)	A37
Administrative and economic corruption	A3	Traditional agricultural methods and tools	A38
Land brokerage	A4	Shortage of marketable land	A39
Growth of luxury orientation	A5	Prominence of tourism activity	A40
Converting cash into property and land	A6	Artificial price suppression for market control	A41
Rising housing and land prices	A7	Weak institutional monitoring and enforcement	A42
Capitalist mindset across social classes	A8	Absence of fiscal and taxation laws regulating land sales	A43
Desire for second homes or villas	A9	Creation of exclusive spaces resulting from inappropriate policies	A44
Aspiration for aristocratic lifestyles	A10	Economic instability and insecurity in the agricultural sector	A45
Lack of appropriate tourism models for northern regions	A11	Stagnation and decline in agricultural production	A46
Tendency toward residence and leisure in the north	A12	Lack of economic justification for agricultural lands	A47
Proximity to Tehran	A13	Capital accumulation in urban areas	A48
Tourism attractiveness of rural areas	A14	Weakness of productive economic sectors	A49
Lack of motivation to work	A15	Widespread rural unemployment	A50
Capital flow toward non-productive, asset-based goods	A16	Relative increase in the price of marketable lands	A51
Land-use change of purchased lands	A17	Climate-induced migration and population influx	A52
Pollution in urban settlements	A18	Removal of agricultural lands from the production cycle	A53
Changing national climatic conditions	A19	Low land prices in rural areas	A54
Availability and easy access to water	A20	Media advertising	A55
Drought and water scarcity	A21	Poor management of water resources	A56
Inheritance laws	A22	Import of agricultural products	A57
Absence of deterrent regulations	A23	Weak management of tourism complexes	A58
Lack of supportive agricultural policies	A24	Substandard or inadequate urban housing	A59
Urban-centered development policies	A25		
Unregulated villa construction	A26		
Lack of awareness regarding the consequences of land sale	A27		
Fragmented (island-like) institutional functioning	A28		
Policies promoting private vehicle ownership	A29		
Macro-level land and housing issues	A30		
Weak role of the education system	A31		
Absence of secure/safe markets	A32		
National economic recession	A33		
Access to windfall profits	A34		
Low income in the agricultural sector	A35		

To enhance the external validity of the study and assess the consistency of the identified mechanisms with the lived experiences of the local community, an online questionnaire was distributed among 300 residents from the six counties of the study area. The data obtained from this questionnaire were not used in the MICMAC analysis; rather, they served qualitative validation purposes, contributing to a deeper contextual understanding and improving the accuracy of interpreting interrelationships among the variables. The results of this stage were also instrumental in ensuring the external validity of the research.

In the subsequent stage, a cross-impact matrix for the 59 variables was constructed using a four-level scale (0: no influence, 1: weak influence, 2: moderate influence, 3: strong influence). Each of the ten experts completed the matrix independently, and the final matrix was generated by averaging their responses. The data were then entered into the MICMAC software to determine the direct and indirect influence and dependence of each variable, classify the variables into the four structural quadrants (driving, dependent, linkage, and autonomous variables), and generate the system's influence–dependence map.

To ensure the precision of the instruments, research validity was assessed through expert confirmation (content validity), conceptual coherence of variables (construct validity during thematic analysis), and comparison of findings with data from the local community (external validity). Additionally, to evaluate the reliability of the quantitative instrument, Cronbach's alpha was calculated for the community questionnaire, with values exceeding 0.8 for most components, indicating satisfactory instrument reliability.

4. Research Findings

The results of the MICMAC structural analysis indicate that land commodification in the urban–rural zones of western Guilan is shaped by the interaction of a complex set of institutional, economic, social, and spatial variables. The analysis of influence and dependence levels shows that a substantial portion of the system's dynamics is driven by factors that are inherently structural, policy-based, and managerial in nature—variables that function as the system's primary driving forces.

4.1. Driving Variables Analysis in Quadrant I (High Influence / Low Dependence)

The influence–dependence analysis within the MICMAC model reveals that the process of land commodification is shaped by a set of variables located in Quadrant I (High Influence / Low Dependence). This position indicates that factors such as administrative and economic corruption (A3), the prominent role of tourism (A40), the absence of fiscal and tax regulations governing land sales (A43), aspirations for luxury-oriented lifestyles (A10), the weakness of productive economic sectors (A49), the absence of deterrent regulations (A23), the lack of agricultural support policies (A24), fragmented and uncoordinated institutional governance (A28), and broader economic recession and the absence of secure financial markets (A32), are not outcomes of other variables; rather, they constitute the foundational drivers that shape the overall direction of the system (Figure 2).

Among these factors, institutional and regulatory weakness exerts the strongest influence on land commodification. The absence of deterrent regulations (A23) and the lack of effective fiscal and tax instruments to regulate land transactions (A43) create a context in which land becomes a low-risk and highly profitable commodity. Without taxation mechanisms to suppress speculative behavior, effective monitoring systems, or restrictive construction regulations, the rules of the land market become increasingly aligned with speculative interests. Since these variables are largely unaffected by others, they play a structural role in shaping the institutional environment and directing the behavior of all actors within the system.

At the same time, governance inefficiency, manifested through fragmented and isolated institutional operations (A28), exerts substantial influence on land commodification. Institutional incoherence, overlapping responsibilities, dispersed decision-making, and the absence of integrated management systems weaken land-use control and oversight. Such fragmentation fosters rent-seeking behaviors, unregulated land-use changes, and intensified speculative pressures—conditions that expose land to rapid conversion into a commercialized asset.

Furthermore, administrative and economic corruption (A3) serves as one of the structural drivers that fundamentally shapes patterns of land use. Corruption facilitates illegal transactions, generates rent-seeking opportunities, undermines monitoring systems, and enables the circumvention of regulations—all of which intensify opportunistic

behavior in the land market and create an environment in which speculative motives override the logic of production and land sustainability.

Economic variables also play a critical role in accelerating land commodification. The weakness of productive economic sectors (A49) and economic recession (A33) reduce the attractiveness of investment in productive activities and redirect capital toward land, which is perceived as a more stable and profitable asset. During periods of recession, economic actors turn to land as a means of preserving the value of their assets, dramatically increasing demand for land.

In contexts where secure economic markets (A32) are lacking and the financial system lacks stability, land becomes widely viewed as the safest investment option. This environment fuels speculative demand and accelerates the pace of land commodification.

In addition, a set of cultural and functional factors further reinforces this cycle. The aspiration toward luxury-oriented lifestyles (A10) increases demand for upscale construction, villa development, and the acquisition of large land parcels. In such circumstances, land is no longer regarded as a biological or productive resource but rather as a symbol of social status—intensifying pressure on natural and agricultural resources. Likewise, the strong influence of tourism (A40) in attractive areas raises land values and stimulates short-term profitable land uses, a process that—without sustainable management frameworks—leads to rapid and often irreversible land-use transformations.

Moreover, the absence of supportive policies for the agricultural sector (A24) reduces both the productivity and the economic attractiveness of agricultural land, thereby increasing the likelihood of land conversion and sale. This directly weakens the productive function of land while reinforcing its speculative role.

The combined effect of these factors demonstrates that land commodification results from the interaction of institutional, economic, cultural, and managerial variables—all of which operate as influential driving forces. These variables are not significantly shaped by other factors; however, they exert considerable influence across the entire network of dependent variables and ultimately determine the future trajectory of the land system. Therefore, any effective policy aimed at sustainable land management must begin with reforming these key drivers, as changes within them have the potential to reorient the entire system.

4.2. Linkage Variables Analysis in Quadrant II (High Influence / High Dependence)

According to the MICMAC analysis, a set of variables falls within Quadrant II (High Influence / High Dependence), commonly referred to as *linkage variables* or *unstable variables*. These variables are highly sensitive because they are strongly influenced by other factors while simultaneously exerting significant effects on the rest of the system. As such, they play a central role in destabilizing the land system. In essence, these variables act as transmission and amplification mechanisms: even minor shifts in the primary driving forces are rapidly reflected in these variables and subsequently transferred to other parts of the system (Figure 2).

Within this quadrant, variables such as the pursuit of profit (A37), land brokerage (A4), growth of luxury-oriented consumption (A5), conversion of cash into property and land (A6), rising housing and land prices (A7), capitalist mindsets across social classes (A8), and the desire for second homes or villas (A9) play a prominent role in reproducing the instability associated with land commodification. These variables function as *structure-induced behaviors* which—due to their high level of influence—accelerate speculative dynamics and rapidly propagate changes throughout the entire system.

For example, the pursuit of profit (A37) and the conversion of monetary assets into property (A6), as reactive economic behaviors, are shaped by the absence of deterrent regulations, weak financial markets, and economic recession. Yet, they immediately amplify land demand, drive up land prices, and activate numerous dependent variables. Similarly, land brokerage (A4) and the emergence of intermediary networks are fueled by regulatory gaps and administrative corruption; in turn, these mechanisms intensify system instability by raising prices and accelerating transactions.

In addition to economic factors, cultural and social variables also feature prominently in this quadrant. The rise of luxury-oriented consumption (A5), the spread of capitalist attitudes across social classes (A8), and the desire for second homes or villas (A9) are simultaneously influenced by structural

economic shifts and regulatory weaknesses, while also increasing demand for land and high-end land uses. These variables act as *lifestyle-driven catalysts*, providing the cultural foundation for speculative demand and increasing pressure on natural and agricultural resources.

In northern regions of the country, the combination of cultural and economic factors has led to behaviors such as the strong inclination toward residence and leisure activities in the north (A12), widespread unregulated villa construction (A26), and land-use conversion of purchased plots (A17). These variables—emerging from weak governance and the area's inherent attractiveness—intensify expected investor returns, escalating demand and accelerating the cycle of land commodification. Under such circumstances, the creation of special-purpose spaces driven by misguided policies (A44) also appears as an unstable variable, since any ineffective macro-level policy is quickly mirrored in new projects and land uses, further reinforcing speculative dynamics.

Furthermore, the dependence of several variables on the economic conditions of the agricultural sector plays a critical role in reinforcing system instability. Economic insecurity and lack of stability in agriculture (A45) and the low income of the agricultural sector (A35) are shaped by structural, legal, and pricing-related factors; however, once changes occur within the system, these variables immediately trigger farmers' withdrawal from productive activities, increase the supply of land for sale, and intensify land-use conversion. This process is directly linked to the relative rise in the price of land available for sale (A51), which expands the supply of agricultural and natural lands entering the speculative market.

Ultimately, the rise in housing and land prices (A7)—one of the most significant linkage variables—is simultaneously influenced by economic, legal, and social conditions, while also amplifying system-wide instability. By increasing demand, generating inflationary expectations, and encouraging investment-driven behavior, this variable rapidly transmits changes throughout the entire system. It serves as the focal point of systemic volatility, and its fluctuations have the potential to disrupt the overall structure of the land market.

Taken together, the variables in this quadrant constitute the fastest-moving and most unstable components of the land system because they both influence and are strongly influenced by other variables. They are direct outcomes of institutional, economic, and cultural conditions, yet by transmitting and magnifying changes, they activate a chain of cascading effects that threaten the overall stability of the system. Therefore, addressing these variables is essential for controlling the process of land commodification, as any change in the primary drivers is immediately reflected in this quadrant and swiftly propagated throughout the system.

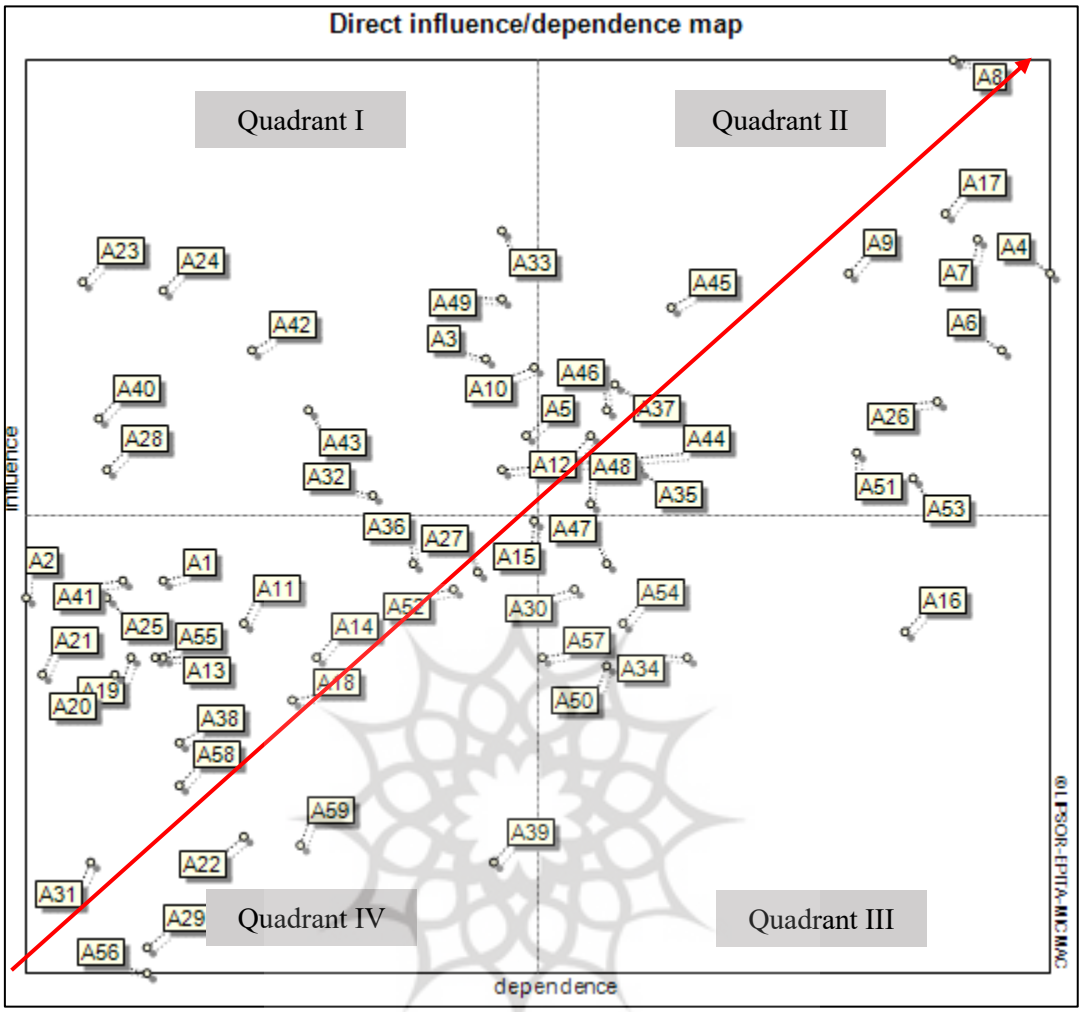

Figure 2. Direct Influence–Dependence Map of Variables Affecting Land Commodification in the Western Region of Guilan Province

4.3. Dependent Variables Analysis in Quadrant III (Low Influence / High Dependence)

Variables located in Quadrant III (Low Influence / High Dependence) represent the most vulnerable components of the system to environmental and structural changes. These variables function as outputs, consequences, or secondary effects of the actions of driving variables (upper left) and linkage variables (upper right). Therefore, changes in these variables do not stem from direct internal agency; rather, they emerge from the overarching legal, economic, institutional, and behavioral conditions that govern the system. As such, these variables serve as indicators reflecting the final condition of the land system.

Within this quadrant, variables such as shortage of marketable land (A39) exhibit high dependence on speculative demand, extensive land-use conversions, and increased speculative transactions. This shortage is a direct result of demand pressures generated by variables such as land brokerage, luxury-driven consumption, second-home demand, and the conversion of monetary assets into property. At the same time, this scarcity is also a symptom of ineffective policies and the absence of supervision over land-use change.

Similarly, the lack of economic justification for agricultural lands (A47) and the low income of the agricultural sector (A35) are strongly shaped by institutional and economic structures. Weak agricultural support policies, the absence of economic security in farming, extensive food imports, and national economic recession collectively diminish the economic attractiveness of agricultural land. This situation drives farmers toward land-use conversion or the sale of their land. This situation directly leads to another variable, namely the withdrawal of agricultural lands from the production cycle (A53). This variable is not an independent driver but rather a shared outcome of

upstream pressures such as rising land prices, the profitability of selling land for villa construction, weak support markets, and instability within the productive sector. For this reason, it is fully dependent on the system's pre-existing structural conditions.

The variable low land prices in rural areas (A54) is likewise dependent on broader economic and demographic trends. Rural outmigration, lack of employment opportunities, and low agricultural productivity are among the main factors contributing to the relatively low value of rural lands. However, this affordability becomes a stimulus for speculative investors and land brokers to enter these areas, eventually driving prices upward in later stages. Therefore, this variable is reactive and dependent rather than an independent influencing factor.

Widespread unemployment in rural areas (A50) represents another highly dependent variable, strongly shaped by economic recession, weaknesses in the agricultural sector, limited employment diversity, and reduced investment in rural regions. Unemployment not only reflects the broader macroeconomic structure but also contributes to an increased supply of agricultural land for sale, further accelerating the withdrawal of land from production.

In such a context, lack of motivation to work (A15) emerges as a socio-behavioral consequence. When the disparity between income derived from productive labor and the profits gained through land transactions becomes substantial, incentives for agricultural or productive work diminish. This variable reflects the unequal relationship between effort and financial return in a land-driven economy rather than functioning as an initiator of change.

Similarly, capital shifting toward investment commodities such as land (A16) is directly influenced by economic instability, the absence of secure financial markets, and rising land prices. This capital movement constitutes a reactive mechanism within the economy and cannot be considered a primary driving force. As soon as changes occur within linkage or driving variables, this variable fluctuates accordingly and further fuels speculative activity.

The relative increase in the price of marketable land (A51) is also a fully reactive variable. This price escalation is a direct outcome of demand pressures associated with villa construction, luxury-oriented consumption, land brokerage, and the shrinking supply of land available for sale. Therefore, rather than being a primary driver, this variable serves as a final indicator of disorder and instability within the land market.

The variable agricultural product imports (A57) also falls within the dependent category, as it is shaped by trade policies, declining domestic production capacity, the withdrawal of agricultural lands from production, and broader weaknesses in the agricultural economy. Increased imports further reduce incentives for investment in agriculture and indirectly intensify the process of land commodification.

Finally, windfall gains (A34) represent one of the most important dependent outcomes in the model. This variable emerges not only from rising land prices and speculative transactions but also reinforces other social–behavioral factors—such as luxury consumption, land brokerage, and the desire for second homes—once these abnormal profits materialize.

Overall, the variables in this quadrant exhibit the highest levels of dependence on structural and institutional conditions and primarily reflect the consequences of more powerful processes operating in other quadrants. They serve as the ultimate indicators of instability within the land system. Accordingly, any meaningful reform must begin with interventions targeting the driving and linkage variables, as only then can lasting changes within this dependent category be achieved.

4.4. Autonomous Variables Analysis in Quadrant IV (Low Influence / Low Dependence)

Based on the MICMAC analysis, a set of variables is located in the lower-left quadrant of the diagram (Figure 2), characterized by both low influence on other variables and low dependence on the overall system. These variables—referred to as *autonomous* or *peripheral variables*—function as environmental, marginal, or complementary factors. They neither play a direct role in shaping the process of land commodification nor are they significantly affected by the system's driving or linkage variables. In other words, they mostly reflect the stable, general, and dispersed characteristics of the system, and their removal would not alter the system's overall trajectory. One such variable is severe currency fluctuations (A1), which, despite its importance in the macroeconomic context, does not exert a direct or enduring influence on the structure of the land market. It may affect certain investment behaviors under specific

circumstances, but it lacks the systemic power to induce fundamental change. Similarly, low bank interest rates (A2) represent another macroeconomic factor whose influence on land investment decisions is limited and sporadic, and which does not significantly shape the dynamics of the northern land market. In the agricultural domain, variables such as the dominance of monoculture farming systems (A36), traditional methods and tools (A38), lack of appropriate tourism models in northern regions (A11), and weak management of tourism complexes (A58), while relevant to explaining production and tourism conditions, do not possess the capacity to produce systemic waves of influence. These factors operate more as practical and cultural background conditions and lack a direct structural connection to the core processes of land commodification. Geographical and urban characteristics also fall within this quadrant. Variables such as proximity to Tehran (A13), the touristic appeal of rural settlements (A14), capital accumulation in urban areas (A48), and urban housing deprivation and inadequate housing conditions (A59), although relevant at local or behavioral scales, lack the systemic influence or transmissive capacity needed to affect other key variables. They function primarily as environmental and cultural indicators that marginally shape land market conditions without serving as fundamental sources of change. From an environmental and demographic perspective, urban settlement pollution (A18), climate change impacts at the national scale (A19), and the presence and ease of access to water resources (A20) also belong to this quadrant. These variables represent general environmental characteristics whose effects on the land market are gradual and limited, and which are insufficient to redirect broader economic or social trajectories. Likewise, climate-induced migration and population influx (A52), as a reactive variable, is mainly shaped by market pressures, rising land prices, and investor behavior, and does not constitute an independent determinant. Peripheral cultural and social variables—such as media advertising (A55), inheritance laws (A22), lack of awareness regarding the consequences of land sales (A27), and policies promoting widespread car ownership (A29)—also fall within this quadrant. These variables play descriptive and low-impact roles and do not possess the capacity to alter major land market trends; instead, they serve as contextual reflections of system changes rather than origins of those changes. Finally, broad policy discourses on land and housing (A30) and the weak role of education systems (A31) represent low-power, peripheral factors with limited influence and dependence, operating merely as complementary variables within the system analysis. Taken together, the variables in this quadrant exhibit minimal influence on other components of the system, limited dependence, and low sensitivity to driving and linkage variables. They play secondary and peripheral roles in shaping the land commodification process, and their removal from the analytical model would have little effect on the system's explanatory capacity. Rather than functioning as transformative forces, these variables primarily reflect general environmental, cultural, and contextual conditions. Consequently, structural reforms and policy interventions should focus on the driving and linkage variables, where meaningful and sustainable changes in the trajectory of land commodification can be achieved. The MICMAC structural analysis demonstrates that the process of land commodification in the urban and rural areas of western Guilan results from the complex interaction of institutional, economic, social, and spatial factors. Within this system, a subset of variables with high influence and low dependence act as key driving forces that shape the overall trajectory of land commodification. These factors are neither the outcomes of other variables nor subject to direct control by them; rather, they possess the capacity to initiate broad, system-wide changes and to accelerate and intensify the commodification process.

In western Guilan, administrative and economic corruption (A3) plays a pivotal role by facilitating illegal transactions, enabling the circumvention of laws, and generating rent-seeking opportunities. This fosters a fertile environment for widespread land speculation, allowing short-term profit motives to dominate over the logic of production and resource sustainability. Similarly, the absence of deterrent regulations and effective monitoring instruments (A23, A43) creates regulatory gaps and inefficiencies in controlling transactions and construction activities. This transforms land into a low-risk, highly profitable asset for capital flows and brokerage networks. Institutional fragmentation and uncoordinated organizational governance (A28) further exacerbate the situation by dispersing

responsibilities, weakening oversight of land use, and increasing unauthorized land-use changes. Such administrative incoherence provides the institutional and managerial conditions necessary for expanding speculative activities and accelerating land commodification. The weakness of productive economic sectors and economic recession (A49, A33) also redirect capital flows toward land, as land becomes the safest and most profitable option for preserving wealth in times of economic instability and in the absence of secure markets (A32). This shift intensifies speculative demand. Additionally, cultural and functional factors such as aspirations for luxury-oriented lifestyles and the strong influence of tourism (A10, A40) stimulate demand for villas and high-end land uses. These factors direct investments and land-use conversions toward luxury development, positioning land not as a productive resource but as a symbol of social status and a tool for rapid financial gain. The absence of supportive agricultural policies (A24) further reduces the economic viability of agricultural land, encouraging its abandonment or conversion and integrating it into speculative markets. This not only accelerates land-use conversion but also, by undermining the resilience of the agricultural sector, strengthens speculative demand for land. These driving forces channel capital flows and speculative demand toward land, functioning as the primary engine of commodification. Even slight changes in these variables can generate ripple effects capable of shifting the entire system toward intensified speculation and short-term price escalation. The analysis of the land system in western Guilan underscores the necessity of reforming these structural drivers to achieve sustainable land governance; without addressing them, the dependent and unstable variables will continue to be influenced in a cascading manner, thereby accelerating the overall process of land commodification. Figure 3 illustrates the most influential and dominant variables shaping land commodification in western Guilan. According to this figure, the commodification trajectory in the region is primarily driven by the runaway escalation of housing and land prices (A7) and the economic recession embedded within the national socio-economic system (A33)—factors that have transformed land into a safe haven for capital. This process is further reinforced by brokerage and speculative activities (A4) and becomes institutionalized through the spread of capitalist mindsets across social classes (A8) and the intensifying desire for second homes or villas (A9). The instability of the agricultural sector (A45) and the weak performance of productive economic sectors (A49) diminish the attractiveness of land as a productive asset, prompting landowners to sell their agricultural lands. Meanwhile, the absence of deterrent regulations (A23) and the weakness of agricultural support policies (A24) act as institutional facilitators, enabling the conversion of purchased lands (A17) and sustaining this cycle in a systemic and self-reinforcing manner.

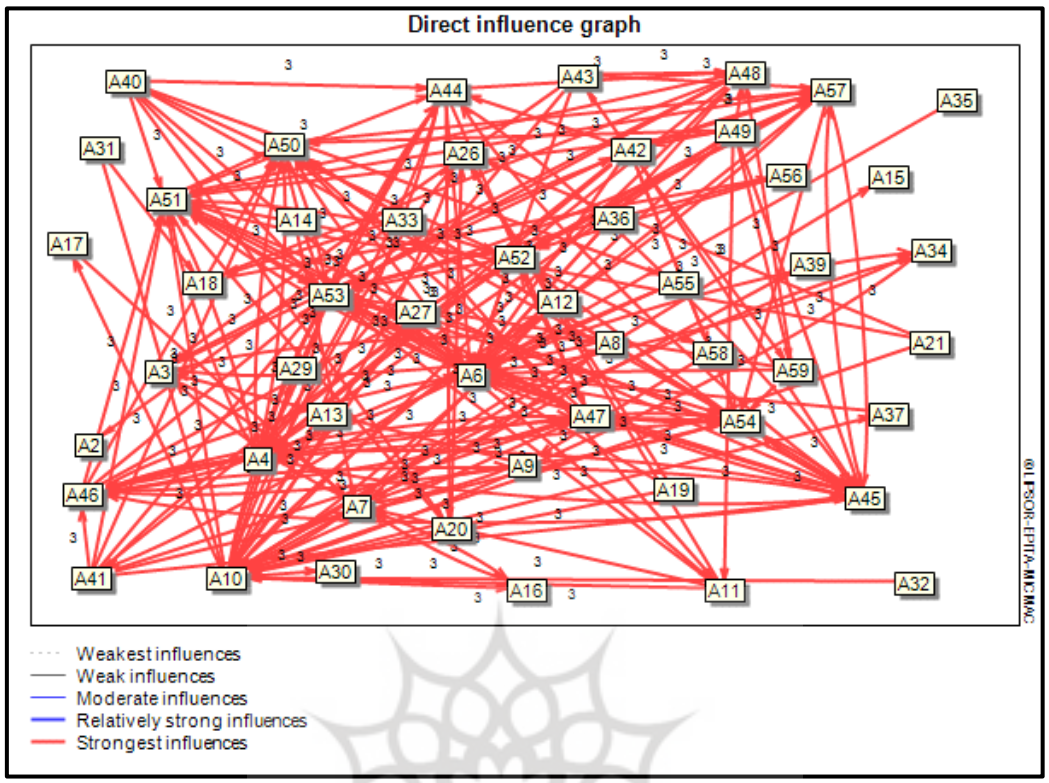

Figure 3. Variables with the Highest Influence on the Process of Land Commodification in the Western Region of Guilan Province

In addition to the direct relationships highlighted in Figure 3, the MICMAC analysis also emphasizes the indirect relationships among the variables (Figure 4), which reinforce the persistence and expansion of land commodification in the western region of Guilan through hidden and chain-like interactions. In fact, indirect effects represent intermediary influences that operate by altering the intensity of other factors and, consequently, affect the key variables. Figure 4 illustrates these relationships and identifies the dependent variables (the most affected ones), which are primarily influenced by direct driving forces such as rising housing prices (A7) and economic recession (A33), yet are further intensified through indirect pathways such as land brokerage (A4) and the spread of capitalist thinking (A8). Accordingly, the most affected variables in the process of land commodification in western Guilan include: the expansion of land brokerage in the region (A4), the conversion of cash into property and land (A6), rising housing and land prices (A7), the formation and reinforcement of capitalist capital-flow networks (A8), villa-oriented lifestyle and second-home culture (A9), land-use conversion of purchased plots (A17), profit-seeking behavior among sellers and buyers (A37), economic instability and insecurity in the agricultural sector (A45), the relative increase in the price of marketable land (A51), the withdrawal of agricultural lands from the production cycle (A53), and unregulated villa construction (A26), all of which represent the most significantly affected components of the commodification process.

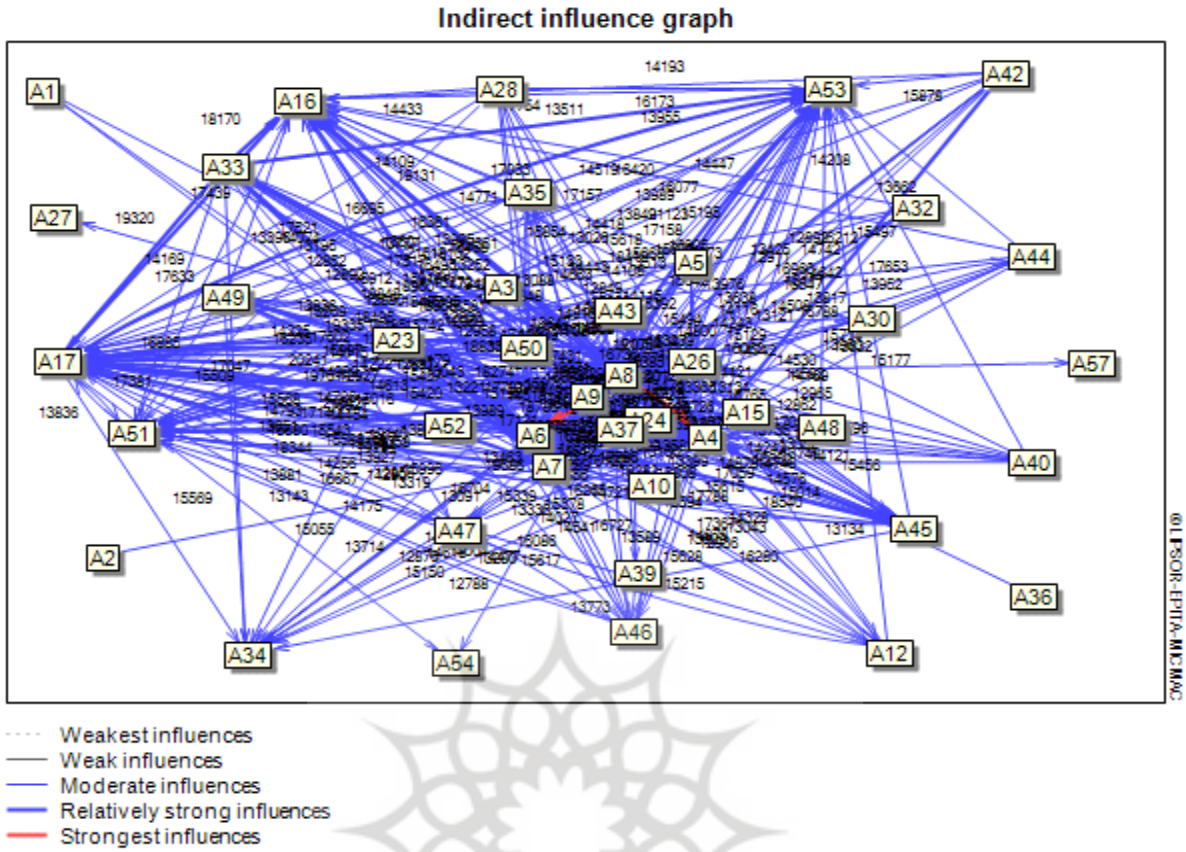

Figure 4. Variables Affected by the Process of Land Commodification in the Western Region of Guilan Province

The findings of the study indicate that the dominant mechanisms governing the land system in western Guilan result from the interaction of a complex set of economic, institutional, social, and spatial forces. The MICMAC-based structural analysis revealed that this system lacks stability and predictability, as the influential variables are widely dispersed around the bisector line of the MICMAC diagram. This condition suggests that the process of land commodification in the region is not driven by a single determinant; rather, it emerges from the synergistic interaction of multiple variables operating within an unstable and feedback-driven cycle. Among the 59 variables examined, a number of factors—due to their high influence and low dependence—serve as the primary and fundamental driving forces. These variables occupy a strategic position in which changes within them can alter the overall trajectory of land system dynamics, accelerating or slowing the commodification process. The most significant of these drivers include: the absence of deterrent regulations governing land transactions; the weakness or lack of governmental support policies for the agricultural and rural sectors; the strong role and demand for tourism in the region; the fragmented, uncoordinated functioning of land-related institutions; and weak oversight and inadequate enforcement of regulations within agencies responsible for agricultural lands and natural resources. Together, these variables form the core of institutional dysfunction, and if left unaddressed, they will continue to facilitate the expansion of speculative activities, intensify demand pressures, and accelerate land-use transformation. The absence of deterrent regulations and the inefficiency of the legal framework have created an environment in which there are no substantial barriers to land speculation, non-transparent transactions, or frequent shifts in ownership. At the same time, weak economic and support policies in the agricultural sector have reduced incentives for maintaining agricultural lands, pushing landowners toward selling their plots and converting them into capital assets. Tourism pressures and the continuous presence of external buyers artificially inflate land values and generate waves of secondary demand in the market. The fragmented, uncoordinated

functioning of land-governing institutions further enables legal loopholes, overlapping responsibilities, and gaps in oversight. Weak enforcement completes this cycle, effectively eliminating the possibility of controlling unregulated villa construction, widespread land-use conversion, and illegal interventions. As a result, these driving forces activate a set of dependent variables and produce visible consequences across the region. The expansion of land brokerage, unprecedented increases in housing and land prices, the spread of a villa-oriented lifestyle, the conversion of agricultural lands, the transformation of liquid capital into real estate, and the withdrawal of farmlands from the production cycle are only part of the outcomes emerging from this mechanism. These outcomes are not primary causes; rather, they represent *direct outputs* of a dysfunctional land governance structure. In reality, land commodification in western Guilan is not a "natural phenomenon" but a direct consequence of institutional weakness and the absence of coordinated policymaking—conditions that have turned rural and agricultural spaces into arenas for speculative and capital-driven competition.

Based on the conducted analyses, it can be concluded that controlling the process of land commodification in the region will only be achievable if interventions are directed toward the key driving forces. Any intervention implemented without accounting for the role of these core variables will merely shift the symptoms rather than address the fundamental sources of pressure within the land system. Therefore, effective policymaking must begin with correcting institutional deficiencies, strengthening enforcement mechanisms, redesigning deterrent regulations, revitalizing support policies in the agricultural sector, and ultimately steering the land system toward balance and sustainability by managing tourism demand and preventing fragmented institutional operations. This analysis shows that the identified driving forces are not only the primary determinants of land commodification but also act as central nodes within the system's network, meaning that the future trajectory of the land system in the region is directly tied to the orientation of these factors. Consequently, any intervention program aimed at controlling or reducing the pace of land commodification must necessarily begin with these leverage points and place strong emphasis on reforming land governance structures and improving oversight, control, and support mechanisms. Accordingly, effective policymaking must focus on strengthening deterrent regulations and monitoring systems, reducing administrative and economic corruption, enhancing institutional coordination and integrated land management, reinforcing productive economic sectors and secure markets, supporting agriculture, and managing both the cultural and economic dimensions of land demand. Reforming these driving forces can redirect capital flows and speculative land demand, thereby moderating the commodification trend. In contrast, neglecting these factors will further entrench land as an increasingly attractive vehicle for investment and short-term profit, undermining its productive and sustainable role. This analysis underscores that structural and institutional drivers in western Guilan fundamentally determine the trajectory of land governance, and addressing them is a necessary condition for sustainable management and for preventing the intensification of land speculation.

5. Discussion and Conclusion

The process of land commodification in the urban–rural areas of western Guilan, as a spatial–economic phenomenon, is not merely the outcome of local or micro-level interactions; rather, it reflects broader ideological, political, and economic forces operating at national and global scales. The MICMAC-based structural analysis, which examined 59 variables within a complex network of direct and indirect relationships, demonstrates that this process forms part of an unstable feedback cycle. In this cycle, institutional and economic drivers—such as legal voids, economic recession, and organizational incoherence—interact synergistically with cultural and social factors, including luxury-oriented lifestyles and the villa-centric culture, transforming land from a biological–productive resource into a capital asset. To gain a deeper understanding, however, this phenomenon must be interpreted through the lens of political economy, which views outcomes not as isolated events but as products of the interaction between dominant ideology, political power, and economic market structures. From a political economy perspective, land commodification in Iran—particularly in regions such as western Guilan, which face intense external demand due to natural amenities and proximity to major urban

centers—is a reflection of the penetration of neoliberal ideology, an ideology that, willingly or unwillingly, operates even within mixed economic systems such as Iran's. The central government, influenced by global political–economic doctrines, pursues policies that privilege market dynamics over socio-ecological priorities. For instance, monetary and exchange-rate policies—such as currency fluctuations and low interest rates—divert capital away from productive sectors and toward non-productive assets like land. This ideology, rooted in capitalist philosophy, transforms land into a low-risk commodity and, by weakening agricultural support systems, paves the way for the privatization of public resources. Within the dominant ideological framework of Iran—grounded in theological and jurisprudential principles—several contradictions emerge. On the one hand, concepts such as private property rights and inheritance law (which appear as peripheral factors in the MICMAC model) safeguard landowners' autonomy; on the other hand, the misalignment of these principles with spatial sustainability needs allows speculative behavior to override social justice. This ideology, by reinforcing private ownership, inadvertently fuels land commodification, with impacts extending from the micro level (such as the conversion of agricultural lands) to the macro level (such as national spatial inequality). In this context, the state, as the primary actor, functions as a facilitator of commodification through its fluctuating regulatory decisions over time—from monetary policies that intensify inflation to the fragmented management of local territorial units, which is often uncoordinated and sectoral. For example, in recent years, government economic strategies—such as promoting tourism without sustainable planning—have heightened speculative demand and transformed land into a site of capitalist competition. Simultaneously, the corporate sector and private actors—including companies, brokers, and interest groups—through market-driven practices, generate spatial tensions in which short-term profitability is prioritized over long-term sustainability. Influenced by global currents in political economy, these actors embed land within the capitalist value chain, producing cascading social effects (such as rural unemployment and migration) and environmental impacts (such as the removal of farmland from production). This macro-level analysis demonstrates that land commodification in western Guilan represents a localized manifestation of a global trend in which dominant economic–political ideologies push governing powers toward market-oriented frameworks, thereby reshaping geographical spaces. The MICMAC results—particularly the system instability reflected in the dispersion of variables around the bisector line—confirm that this phenomenon is not merely local; rather, it forms part of a feedback cycle that flows from the macro scale (national policies and global ideological forces) to the micro scale (local behaviors such as land brokerage and villa construction), and, in turn, feeds back into those higher-level structures. Ultimately, this process poses significant threats to food security, ecological balance, and social justice, highlighting the need for a paradigm shift from market-driven approaches toward sustainable and community-centered models. These findings align with the results of Wang et al. (2018) all of whom emphasize the decisive role of institutional and economic driving forces in land-use change. Furthermore, the outcomes of this study are consistent with the research by Azari et al. (2021) in Tehran, which identified consumerism, weak oversight, a non-productive economy, and the commercialization of land as the most influential drivers of land-use transformation. At the national level, the findings are also consistent with those of Kalali Moghaddam (2015), who shows that in rural areas, residential demand pressures, declining economic profitability in agriculture, and regulatory gaps are among the primary drivers of land-use conversion and the withdrawal of farmlands from production. Similarly, Darban-e-Astaneh (2016) emphasizes that shortcomings in agricultural support policies and the economic constraints of rural households create conditions that encourage land sales and the expansion of non-agricultural land uses. Furthermore, the study conducted by Azizi, Azizpour, and Riahi (2024) on land-use transformations in peri-urban and rural–urban settlements around Tehran demonstrates that weak institutional coordination, the absence of development-guiding policies, and the dominance of market logic over land have led to dispersed construction patterns and rapid land-use change—an outcome that closely mirrors the trajectory observed in western Guilan. Additionally, the pattern observed in western Guilan—characterized by the weakening of the agricultural sector and the expansion of speculative land uses—aligns with the

findings of Motiee Langroudi et al. (2012) in Bandar Anzali, which similarly highlight the erosion of productive land functions and the rise of market-driven land transformations.

5.1. Land-Use Governance Recommendations

5.1.1. Institutional and Legal Reforms

- Formulate and enforce clear, binding regulations governing land purchase and sale, with strict mechanisms to prevent informal or unregistered transactions.
- Reform inheritance laws, land-use regulations, and the legal boundaries of urban and rural settlements, ensuring precise clarification of property rights and ownership limits.
- Establish a targeted taxation system for land-related transactions—including capital gains tax, taxes on repeated transactions, and taxes on idle or vacant land.
- Accelerate the completion of an integrated cadastral system for agricultural lands and natural resources, and develop a comprehensive land information database.

5.1.2. Integrated Land Management

- Establish a Strategic Land Management System involving the agricultural extension organization, natural resources administration, land registration office, municipalities, and district governorates.
- Prevent organizational overlap and create a coordinated mechanism for monitoring and regulating land-use changes.
- Restrict the allocation of public and state-owned lands unless supported by rigorous technical assessments and oversight procedures.

5.1.3. Strengthening the Agricultural Sector and Local Economy

- Expand financial, insurance, and marketing support for farmers to reduce pressure for forced land sales.
- Provide economic incentives to maintain agricultural land use and enhance production efficiency.
- Develop agricultural value chains and promote agro-processing industries to increase local income.
- Diversify rural household income sources to reduce dependency on land sales.

5.1.4. Tourism Management and Construction Control

- Regulate regional tourism and shift from mass tourism toward sustainable, community-based tourism models.
- Implement strict regulations on construction by non-local actors, including withholding infrastructure services from developments that violate land-use regulations.
- Prevent the conversion of agricultural and orchard lands into villa and second-home developments.

5.1.5. Judicial–Protective and Oversight Measures

- Identifying and taking legal action against encroachers on national lands and natural resources, along with the public disclosure of violators' names.
- Implementing preventive strategies by the National Land Protection Council.
- Strengthening the role of the media and public awareness campaigns to combat land speculation and protect land resources.

In the final analysis, it can be stated that if institutional reforms, land market regulation, tourism management, and agricultural support are not implemented in a coordinated and integrated manner in the short term, the process of land commodification in western Guilan will intensify, likely resulting in consequences such as natural resource degradation, reduced agricultural production, social inequality, and environmental crises. However, if the proposed measures—based on the key driving forces identified in this study—are implemented, it will be possible to control destabilizing trends and steer regional development toward sustainable patterns aligned with the area's environmental capacities.

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Authors' contributions

The authors equally contributed to the preparation of this article.

Conflict of interest

The authors declare no conflict of interest.

References

1. Afrakhteh, H., & Rahimi Pour Sheikhani Nejad, M. A. (2020). Land use change in East Guilan and its consequences. *Journal of Sustainable Rural Development, 4*(2), 135–148. https://doi.org/10.32598/jsrd.4.2.3
2. Aspinall, R. J., & Hill, M. J. (Eds.). (2008). *Land use change: Science, policy and management* (1st ed.). CRC Press. https://doi.org/10.1201/9781420042979
3. Azari, M., Kozegarkaleji, L., Tavakolinia, J., & Heydari, A. (2021). Investigating the role of driving forces in land use changes and the spatial evolution of the city with a futurology approach (Case study: District 12 of Tehran). *Journal of Spatial Planning, 25*(2), 121–144. https://doi.org/20.1001.1.16059689.1400.25.2.6.3
4. Azizi, S., Azizpour, F., & Riahi, V. (2024). Analyzing land use changes in rural settlements in the metropolitan area of Tehran: The case study of Shahriar County. *Journal of Rural Research, 15*(3), 127–148. [In Persian] https://doi.org/10.22059/jrur.2024.368942.1892
5. Barlowe, R. (1986). *Land resource economics: The economics of real estate*.
6. Briassoulis, H. (2020). *Analysis of land use change: Theoretical and modeling approaches* (2nd ed.). WVU Research Repository.
7. Daly, H. E., & Cobb, J. B. (1991). *For the common good: Redirecting the economy toward community, the environment, and a sustainable future*. Beacon Press. (Reviewed in 1991, *Bulletin of Science, Technology & Society*, 11(1), 42–43). https://doi.org/10.1177/027046769101100137
8. Darban-e-Astaneh, A. (2016). An investigation of the factors affecting land use changing (Mahmoudabad Town–Iran). *Journal of Research and Rural Planning, 5*(1), 23–40. https://jrrp.um.ac.ir/article_28320.html
9. Dempsey, J. A., Plantinga, A. J., Kline, J. D., Lawler, J. J., Martinuzzi, S., Radeloff, V. C., & Bigelow, D. P. (2017). Effects of local land-use planning on development and disturbance in riparian areas. *Land Use Policy, 60*, 16–25. https://doi.org/10.1016/j.landusepol.2016.10.01 1
10. Fu, L., & Sanada, J. (2023). Spatial patterns and influencing factors of rural land commodification at township scale: A case study in Shijiazhuang City, North China. *Land, 12*(6), 1194. https://doi.org/10.3390/land12061194
11. Haila, A. (1991). Four types of investment in land and property. *International Journal of Urban and Regional Research*, 15(3), 343–365. https://doi.org/10.1111/j.1468-2427.1991.tb00643.x
12. Henderson, V. (2017). Medium-size cities. *Regional Science and Urban Economics, 27*(6), 583–612. https://doi.org/10.1016/S0166-0462(96)02169-2
13. Hersperger, A. M., Mueller, G., Knöpfel, M., Siegfried, A., & Kienast, F. (2018). Evaluating outcomes in planning: Indicators and reference values for Swiss landscapes. *Ecological Indicators, 77*, 96–104. https://doi.org/10.1016/j.ecolind.2017.02.004
14. Kalali Moghaddam, Z. (2015). An investigation of the factors affecting land use changing of agricultural lands (Case study: Rural Areas of Rasht County, Iran). *Journal of Research and Rural Planning, 4*(1), 113–132. https://doi.org/10.22067/jrrp.v4i9.33738
15. Kolhe, N. P., & Dhote, K. K. (2016). Rurban centres: The new dimension of urbanism. *Procedia Technology*, 24, 1699–1705. https://doi.org/10.1016/j.protcy.2016.05.198
16. Koomen, E., Stillwell, J., Bakema, A., & Scholten, H. (2007). *Modelling land-use change: Progress and applications*. Springer. https://doi.org/10.1007/978-1-4020-5648-2
17. Mahmoudzadeh, H. (2017). Application of artificial neural network in modeling and forecasting land use changes in Sardroud City (1984–2031). *Journal of Geography and Planning*, 21(60), 221–237. [In Persian]
18. Motiee langroudi, S. H., Rezvani, M. & Kateb Azgomi, Z. (2012). Economic effects of agricultural land use change on rural area (Dehestan of Licharaki Hasan-rood, Bandar Anzali). *Journal of Research and Rural Planning*, 1(1), 1-23. https://doi.org/10.22067/jrrp.v1i1.14983
19. Mousavi, M. N., & Yazdani Chaharborj, R. (2015). Land-use suitability analysis of Tabriz City growth with AHP-OWA model. *Geography and Urban Planning Research*, 3(3), 361–381. [In Persian] https://www.magiran.com/paper/1483846
20. Randall, A., & Castle, E. N. (1985). Land resources and land markets. In A. V. Kneese & J. L. Sweeney (Eds.), *Handbook of natural resource and energy economics* (Vol. 2, pp. 571–620). Elsevier.
21. Renne, R. R. (1958). *Land economics: Principles, problems, and policies in utilizing land resources*. Harper. http://hdl.handle.net/10973/28977

22. Rimal, B. (2011). Application of remote sensing and GIS: Land use/land cover change in Kathmandu Metropolitan City, Nepal. *Journal of Theoretical and Applied Information Technology*, 23, 80–86.
23. Shoja, F., Veisi Nabikandi, B., & Feizizadeh, B. (2025). Spatiotemporal analysis of land-use change in Tehran Province using novel geospatial technologies. *Journal of Geography and Cartography, 8*(2), 11630. [In Persian] https://doi.org/10.24294/jgc11630
24. Van Vliet, J., Bregt, A. K., Brown, D. G., van Delden, H., Heckbert, S., & Verburg, P. H. (2016). A review of current calibration and validation practices in land-change modeling. *Environmental Modelling & Software, 82*, 174–182. https://doi.org/10.1016/j.envsoft.2016.04.017
25. Walker, R. (2004). Theorizing land-cover and land-use change: The case of tropical deforestation. *International Regional Science Review*, 27(3), 247–270. https://doi.org/10.1177/0160017604266026
26. Wang, J., He, T., & Lin, Y. (2018). Changes in ecological, agricultural, and urban land space in China: Land policies and socio-economic drivers. *Habitat International, 71*, 1–13. https://doi.org/10.1016/j.habitatint.2017.10.010
27. Wu, F., Mo, C., & Dai, X. (2022). Analysis of the Driving Force of Land Use Change Based on Geographic Detection and Simulation of Future Land Use Scenarios. *Sustainability, 14*(9), 5254. https://doi.org/10.3390/su14095254
28. Zali, N., & Zamanipoor, M. (2015). Systematic analysis of strategic variables of regional development in scenario-based planning (Case: Mazandaran Province). *Town and Country Planning*, 7(1), 1–28. https://doi.org/10.22059/jtcp.2015.54779

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چکیده مبسوط

۱. مقدمه

فضا مفهومی چندبعدی است که ابعاد اجتماعی، اقتصادی، محیطی و اکولوژیک را در بر می‌گیرد؛ اما در دهه‌های اخیر، این فضا در مقیاس‌های خرد و کلان، به‌ویژه در کشورهای در حال توسعه، در معرض فرآیند کالایی‌شدن قرار گرفته است. در این فرآیند، اجزای مختلف فضا به مجموعه‌ای از کالاها و روابط کالایی تبدیل می‌شوند که هدف اصلی آن‌ها کسب سود و منفعت اقتصادی است. زمین به عنوان یکی از بنیادی‌ترین عناصر فضا، بیش از سایر ابعاد درگیر این روند شده است. در چنین چارچوبی، زمین از بستر تولید و زیست اجتماعی به کالایی قابل‌مبادله با ارزش اقتصادی صرف تبدیل شده است. در ایران، تحولات اقتصادی و اجتماعی سال‌های اخیر، به‌ویژه در مناطق شمالی، موجب شتاب فزاینده تغییر کاربری اراضی کشاورزی، جنگلی و مرتعی به کاربری‌های سرمایه‌ای و تفریحی مانند ویلاسازی و خانه‌های دوم شده است. این روند نه‌تنها اکوسیستم‌های طبیعی را تهدید می‌کند، بلکه پایداری اجتماعی و معیشت محلی را نیز با چالش مواجه ساخته است. پژوهش حاضر با تمرکز بر نواحی شهری–روستایی غرب استان گیلان، در پی شناسایی ویژگی‌ها و عوامل مؤثر بر کالایی‌شدن زمین، تحلیل پیامدهای فضایی و کالبدی آن، و ارائه راهکارهایی برای مدیریت و کنترل این فرآیند در راستای توسعه پایدار منطقه است.

۲. مبانی نظری تحقیق

در جوامع معاصر، زمین از یک عامل تولید سنتی به کالایی اقتصادی بدل شده است. این تغییر، حاصل برهم‌کنش نیروهای سیاسی، اقتصادی و اجتماعی است که نظریه‌های گوناگونی به تبیین آن پرداخته‌اند. از دیدگاه کارکردگرایی ساختاری، زمین عنصری پویا در نظام فضایی است که به‌تدریج کارکردهای تولیدی و مبادله‌ای می‌یابد. رویکرد اقتصاد سیاسی فضا، کالایی‌شدن زمین را پیامد جریان‌های قدرت، دولت و سرمایه، به‌ویژه تحت سلطه نئولیبرالیسم و جهانی‌شدن می‌داند. نئولیبرالیسم با کاستن از نقش دولت و تأکید بر بازار، زمین را به کالایی با ارزش مبادله‌ای تبدیل و نابرابری‌های فضایی را تشدید می‌کند. نظریه انتقادی سرمایه‌داری متأخر از منظر هاروی، شهری‌شدن را مدار انباشت سرمایه می‌داند که از طریق کالایی‌سازی فضا نابرابری‌های اجتماعی را افزایش می‌دهد. در نهایت، دیدگاه مارکسیستی و سرمایه‌داری مستغلات بر نقش دولت به‌عنوان بازوی سرمایه و بر سوداگری زمین تأکید دارد. حاصل این فرآیند، غلبه ارزش مبادله‌ای بر ارزش مصرفی و تبدیل زمین از عنصری طبیعی و اجتماعی به کالایی اقتصادی است.

۳. روش‌شناسی تحقیق

پژوهش حاضر از نظر هدف، کاربردی، و از نظر ماهیت، توصیفی-تحلیلی است و با رویکرد آمیخته (کمی و کیفی) انجام شده است. روش جمع‌آوری اطلاعات شامل مطالعات اسنادی و میدانی از جمله مصاحبه با خبرگان و توزیع پرسشنامه آنلاین بوده است. قلمرو جغرافیایی مطالعه شامل پهنه سکونتگاهی نواحی شهری-روستایی غرب استان گیلان است و واحد تحلیل، پهنه کاربری‌های رایج منطقه و کارشناسان و خبرگان محلی در نظر گرفته شده‌اند. برای انتخاب این گروه از روش نمونه‌گیری هدفمند استفاده شده است. برای تحلیل داده‌ها، ابتدا جهت تحلیل تغییرات کاربری اراضی در یک بازه زمانی ۳۰ ساله (۱۳۶۹ تا ۱۳۹۹)، از تصاویر ماهواره‌ای لندست استفاده گردید. برای افزایش دقت طبقه‌بندی، از شاخص پوشش گیاهی و مدل ارتفاعی زمین (DEM) ماهواره ALOSpalsar نیز بهره گرفته شد. در گام بعدی، جهت شناسایی عوامل پیشران و کلیدی مؤثر بر کالایی شدن زمین، پس از

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کدبندی متغیرها در نرم‌افزارSPSS ، از روش تحلیل اثرات متقاطع و نرم‌افزار MICMAC استفاده گردید. به طور کلی، تجزیه و تحلیل داده‌ها با استفاده از نرم‌افزارهایSPSS ، GISو MATLAB صورت پذیرفت.

۴. یافته‌های تحقیق

پژوهش نشـــان می‌دهد که زمین در غرب اســـتان گیلان از کارکرد اصـلی خود خارج شـده و به مثابه کالایی برای کسـب سـود، حفظ و انباشـــت ســـرمایه در قالب خانه‌های ویلایی، املاک زراعی و باغی، و طرح‌های گردشگری به صورت گسترده‌ای خرید و فروش می‌شود. این روند از دهه ۹۰ شـمسـی شـدت گرفته و در حال گسـترش اسـت و نظارت دقیقی بر آن وجود ندارد. بررسـی تصـاویر ماهواره‌ای در طول دوره سـی‌سـاله مورد مطالعه نشـان داد که بیشـترین شـدت تغییرات کاربری به سـمت کلاس‌های مسـکونی، مرتع و اراضـی بایر بوده اسـت، که این امر ناشی از حجم بالای تقاضا برای مسکن، حضور گردشگران به عنوان خانه‌های دوم و مهاجرت‌های روستا به شهر است. همچنین، تحلیل میک‌مک و نظرات کارشناسان نشان داد که کالایی‌شدن زمین در منطقه چندوجهی بوده و عوامل مدیریتی-نهادی، اقتصـــادی و سیاستگذاری از مهم‌ترین عوامل پیشران و کلیدی محسوب می‌شوند. ضـــعف نظارتی و اجرایی ســـازمان‌های متولی زمین و کشـــاورزی، جزیره‌ای عمل کردن این ســـازمان‌ها، نبود قوانین بازدارنده، ضـــعف سیاسـت‌های حمایتی دولت در حوزه کشـاورزی و روسـتاییان، پررنگ بودن نقش گردشگری و وجود سیاست‌گذاری‌های کلان ملی و قوانین غیرشـــفاف از جمله مهم‌ترین عوامل مؤثر بر این پدیده هســـتند. در نهایت، اثرات کالایی شـــدن زمین در این منطقه در قلب پیامدهای اقتصادی، زیست‌محیطی-کالبدی و اجتماعی-فرهنگی بروز کرده است.

۵. بحث و نتیجه‌گیری

تحلیل نتایج به وضـــوح تأیید می‌کند که زمین از کارکرد تولید خارج شـــده و به یک کالای ســـرمایه‌ای، قابل ذخیره و احتکار تبدیل شـــده است؛ این پدیده عمدتاً معلول ساختار نظام سرمایه‌داری نئولیبرالیسم و ســـودآوری ســـرمایه‌داری مســـتغلات، و همچنین ضـــعف قوانین و مدیریت ناکارا بوده که منجر به ناســـازگاری‌های فضـــایی و خروج سرمایه از مسیر تولید شده است. بررسی‌ها همچنین هشدار می‌دهد که در صـــورت تداوم روند کنونی، در آینده‌ای نزدیک کارکردهای کشـاورزی به نفع عملکرد خدمات گردشـگری و فعالیت‌های تفریحی تحول خواهند یافت. تنها راه جلوگیری از این روند، کنترل عوامل مؤثر بر کالایی شـــدن زمین از طریق ارائه راهکارهای مدیریتی و اجرایی است. مهم‌ترین راهکارهای پیشنهادی در سه حوزه اصلی قابل دسته‌بندی هستند: ۱. ایجاد بستر قانونی و نظارتی، شامل جلوگیری از خریـد و فروش زمین بـدون سـنـد، سـنـددار کردن املاک (کاداسـتر/حدنگاری)، تشـکیل بانک زمین، و تدوین قوانین بازدارنده سـخت‌گیرانه در ارتباط با کاربری زمین؛ ۲. مدیریت فضـایی از طریق راه‌اندازی ســـامانه یکپارچه تعیین کاربری زمین، عدم ارائه خدمات زیرساختی به سازه‌های خارج از بافت روستا، و کنترل دقیق و مستمر بر طرح‌های توسعه روستایی؛ و ۳. کنترل اقتصادی و اجتماعی شامل ایجاد محدودیت برای خریداران غیربومی از طریق قانون، تنوع بخشی به منابع درآمدی روسـتاییان و قیمت‌گذاری و تعیین نرخ برای اراضـی کشـاورزی. در نهایت، پیشـنهاد می‌شـود در تحقیقات آینده، نقش نهادها و ســـازمان‌های دولتی و تأثیر قوانین فرادســـت و ایدئولوژی حاکمیت بر روند کالایی شدن زمین به صورت عمیق‌تری مورد بررسی قرار گیرد.

کلیدواژه‌ها: کالایی‌شدن زمین، عوامل کلیدی، معاملات زمین، تحلیلMICMAC ، پیوند آب–غذا–انرژی.

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