

The Economic Returns of Language Proficiency: A Review Based on the Perspective of Language Asset Pricing

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Author Notes

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Abstract

With the rapid development of globalization, the digital economy, and artificial intelligence, language proficiency has become a crucial factor influencing individual income, employment quality, and occupational mobility. Existing research largely explains the economic returns of language proficiency from the perspectives of human capital, labor market signals, and social capital. However, this perspective is relatively static and fails to fully explain the differentiated returns of language proficiency across different countries, industries, and individuals. It also struggles to explain the devaluation, reassessment, and structural differentiation of language proficiency under the impact of artificial intelligence. Therefore, this paper introduces the analytical approaches of asset pricing, portfolio construction, and risk-return from financial economics, understanding language proficiency as a “language asset” with investment costs, expected returns, risk exposure, and allocation value. Research shows that the economic returns of language assets are not solely due to wage premiums, but are formed through mechanisms such as information arbitrage, operating income, skill leverage, market access, and online and real options. Different language assets exhibit different risk-return characteristics: English proficiency resembles a highly liquid blue-chip language asset; bilingual proficiency reflects portfolio allocation and risk diversification value; and multilingual proficiency exhibits characteristics of growth assets and real options. The returns of language assets are also influenced by the national environment, industry structure, job demand, and the individual’s skill set. Artificial intelligence is further altering the pricing logic of language assets: the scarcity of basic language conversion skills is decreasing, while higher-order values such as contextual judgment, cross-cultural understanding, and human-machine collaboration are increasing. This article argues that the economic returns of language skills should be

Received 17 July 2026; revised 21 August 2026; accepted 6 September 2026; available online 25 September 2026; version of record 30 September 2026.

Citation: Wei, S. H. (2026). The economic returns of language proficiency: A review based on the perspective of language asset pricing. *Journal of Language*, 2(3), 40–87.
<https://doi.org/10.64699/26LSAU2848>

understood from a static “skill premium” to a dynamic “asset pricing” perspective.

Keywords: language assets, asset pricing, economic returns, investment portfolio, artificial intelligence

In the context of globalization and the digital economy, language proficiency is no longer merely a communication tool, but a crucial ability influencing individual income, employment quality, and occupational mobility. The expansion of multinational corporations, the deepening of international division of labor, and increased cross-cultural collaboration mean that language proficiency directly impacts workers’ access to information resources, entry into high-value positions, and career development opportunities. Therefore, the economic returns of language proficiency have become a significant topic of common concern in language economics, labor economics, and human capital research (Ginsburgh & Weber, 2020).

Existing research typically explains the economic value of language skills from three perspectives: human capital, labor market signals, and social capital. Language skills can improve communication efficiency and productivity, signal educational level and learning ability to employers, and help individuals access broader social networks. These explanations provide a foundation for understanding the returns of language skills, but they still have shortcomings: most treat language skills as a relatively static stock of skills, and rarely explain why language skills vary significantly across countries, industries, and individual skill combinations.

This paper attempts to introduce an asset pricing perspective from financial economics, understanding language skills as a kind of “language asset.” A language asset refers to the stock and combination of language skills that individuals develop through time, money, and educational investments, which can generate income, employment opportunities, occupational

mobility, and social network benefits in the future labor market, and are influenced by market demand, industry structure, institutional environment, and technological changes (Ginsburgh & Weber, 2020; Lang, 2022). Compared to the traditional human capital perspective, the language asset perspective emphasizes the investment costs, expected returns, risk exposure, depreciation potential, and portfolio value of language skills.

Within this framework, the economic returns of language skills are no longer simply a wage premium, but rather the result of how language assets are priced under different market conditions. Its value depends on its universality, scarcity, and convertibility, and is also influenced by national environment, industry demand, individual skill sets, and technological changes.

It should be noted that the concepts of “asset pricing,” “portfolio,” and “option value” used in this paper are primarily heuristic analytical tools, rather than equating language ability entirely with financial assets such as stocks and bonds. Language assets cannot be freely traded in the secondary market like financial assets, and it is difficult to form a unified, transparent, and continuous market price. This paper introduces a financial economics perspective to more clearly explain the variability and dynamism of the economic returns of language ability by using concepts such as return, risk, depreciation, allocation, and revaluation. Therefore, the language asset pricing framework is not a replacement for human capital theory, signaling theory, and social capital theory, but rather a further extension of these theoretical foundations.

This paper employs a literature review approach to analyze the question of “how language assets generate economic returns.” This article first constructs the theoretical foundation and return mechanism for language asset pricing; secondly, it discusses the methods

for measuring, valuing, and identifying language assets; thirdly, it compares the risk-return characteristics of English, bilingual, and multilingual abilities; subsequently, it analyzes the heterogeneity of returns at the national, industry, and individual levels; and finally, it explores the revaluation of language assets under the impact of artificial intelligence.

1. The Theoretical Basis and Return Mechanism of Language Asset Pricing

1.1 From Human Capital to Language Assets: A Conceptual Shift

From an economic perspective, language ability possesses typical human capital attributes. Individuals accumulate language skills through education, training, and practice, thereby improving their efficiency in information acquisition, communication, collaboration, and task completion, ultimately leading to improved income levels and employment performance. Existing research has found that language training can significantly increase the employment probability of unemployed immigrants and improve their labor market performance. This empirically demonstrates that language ability is not simply a communication tool, but a form of competence capital that can influence labor market outcomes (Lang, 2022).

Language ability is not merely a general skill. Language is embedded in specific social relationships, cultural environments, and institutional structures. Mastering a language often means access to corresponding information channels, social groups, and career opportunity networks. Therefore, language ability possesses both linguistic and social capital attributes; its economic value derives not only from increased productivity but also from social connections, identity adaptation, and opportunity acquisition.

Based on this, the language asset perspective is not a negation of the human capital and

language capital perspectives but rather a further advancement of both. The human capital perspective emphasizes how language ability increases worker output, the language capital perspective emphasizes how language ability connects social resources, while the language asset perspective further focuses on the investment costs, expected returns, risk exposure, depreciation potential, and allocation value of language ability in the market. In other words, the economic returns of language ability are not automatically generated by the skill itself but are the result of pricing within specific market demands, industry structures, institutional environments, and technological conditions.

This conceptual shift allows this paper to understand the economic returns of language ability from a more dynamic perspective. Traditional perspectives primarily explain the value and use of language skills, while the language asset perspective further explores why language skills yield different returns in different contexts, when they might depreciate, and how they can be combined with other skills to form long-term value. Therefore, the following section will focus on analyzing the sources of income, risk structure, and value changes of language assets.

1.2 Sources of Income for Language Assets: Diversified Cash Flow Mechanisms

Having clarified the asset attributes of language skills, the next step is to explain how language skills translate into income, employment opportunities, and career development advantages. Related research indicates that language itself is not merely a medium of communication; it can also generate a “language dividend” with real economic significance. The returns do not come from a single channel but are realized through multiple mechanisms (Li, 2023). From the perspective of language asset pricing, these mechanisms can be

understood as the multiple sources of “diversified cash flows” generated by language assets.

(1) Information Arbitrage Mechanism

Language assets generate economic value primarily by reducing the cost of information acquisition. In the context of globalization and the digital economy, a wealth of high-value information, such as international market dynamics, technological frontiers, and business opportunities, often exists in specific language forms. Individuals with the corresponding language skills can access and understand this information at a lower cost, thereby gaining an advantage in employment choices, career decisions, and resource allocation. From the perspective of language asset pricing, this is similar to information arbitrage: holding language assets allows one to leverage information barriers between different language markets, gain access to broader information sources and higher-quality information judgments, which in turn translates into better performance in the labor market.

(2) Operating Cash Flow Mechanism

Language assets can also generate direct returns by improving communication efficiency. Within organizations, employees with strong language skills can participate more smoothly in teamwork, reducing communication errors and improving task completion efficiency. In multinational corporations or international business scenarios, language skills can reduce transaction costs, decrease reliance on intermediaries, and improve business efficiency. Therefore, language skills not only affect individual productivity but also improve organizational operations and market transaction efficiency. From an asset pricing perspective, this is equivalent to language assets directly participating in the production process and continuously generating operating returns.

(3) Skill Leverage Mechanism

The value of language assets is also reflected in their amplifying effect with other forms of human capital. Language ability typically does not generate returns in isolation, but rather works in conjunction with education level, professional skills, and work experience. Existing research indicates a significant interaction between language ability and education; the impact is not simply additive, but more likely manifests as a further amplification of income returns (Li & Zhang, 2022). Therefore, language ability can be understood as a kind of “skill leverage”: by enhancing the ability to express, translate, and apply professional knowledge across scenarios, it amplifies the market value of an individual’s original skill set.

(4) Credit Rating and Market Access Mechanism

Language assets also influence individual returns through labor market screening mechanisms. In the actual recruitment and promotion process, companies often face information asymmetry, making it difficult to fully observe the true abilities of job seekers. Therefore, they rely on language certificates or actual speaking skills to judge a candidate’s learning, communication abilities, and job suitability. In this context, language ability transforms into a “credit rating” signal, affecting whether an individual can enter a higher-quality, more ideal position. Existing research has also found that Mandarin proficiency significantly affects the quality of employment, indicating that language ability itself may become an important standard for labor market screening (Wang, 2021). The core of this mechanism lies not in language ability directly improving productivity, but in its alteration of an individual’s likelihood of obtaining different career opportunities.

(5) Network Options and Real Options Mechanisms

Language assets can generate long-term returns by expanding social networks and preserving future options. Individuals with language skills can more easily enter cross-cultural or international communication scenarios, thereby accessing more information, networks, and implicit opportunities. Many employment and promotion opportunities, and collaborative projects often circulate via informal channels, relying on information transmission and trust building within relationship networks, which reflects the network option value of language assets. At the same time, language skills may also preserve an individual's option to enter new markets and change career paths in the future, which is closer to the logic of real options. Although a certain language skill may not immediately translate into a wage premium in the current position, it may generate value in future market changes or career transitions. Therefore, the returns on language assets are reflected not only in current income but also in the potential returns in long-term career development.

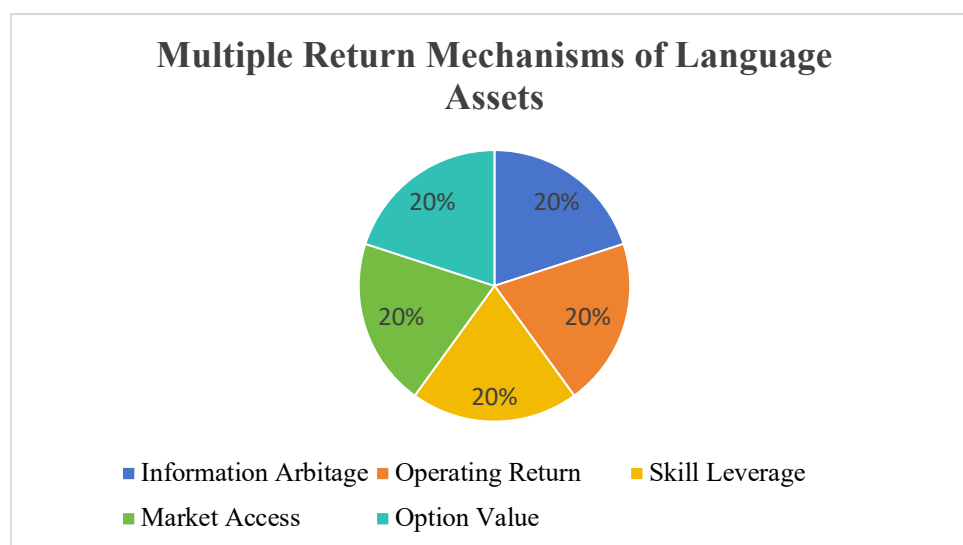
It should be noted that the mechanisms of “information arbitrage” and “network options” often reinforce each other in reality, but their theoretical focuses are different. Information arbitrage focuses on how language skills help individuals gain economic benefits from information asymmetry. Its core is “information gap,” such as earlier access to international market dynamics, overseas career opportunities, or cutting-edge knowledge. Information arbitrage emphasizes the informational advantage brought by language skills and its improvement in decision-making efficiency. Network options, on the other hand, focus on the right to access relationship networks brought by language skills. Its core is “relationship access,” such as entering a cross-cultural community, international organization, or professional exchange network, thereby gaining implicit employment opportunities and the possibility of

long-term cooperation. Network options emphasize the impact of language skills on opportunity structures, relationship networks, and long-term options. In empirical research, the effects of these two mechanisms are often difficult to completely separate, but distinguishing between them still helps to better understand the different sources of language asset returns.

Overall, the economic returns of language assets are not simply wage premiums, but are composed of multiple sources. The value of language assets comes from both actual use in the current labor market and potential gains in future career development. To more intuitively present the multiple sources of language asset returns, the above mechanisms can be summarized into the five types of return mechanisms shown in Figure 1.

Figure 1

Multiple Return Mechanisms of Language Assets



Note: This figure is a conceptual illustration. The proportions indicate that the five mechanisms jointly constitute language asset returns, rather than empirically estimated weights.

1.3 Risks, Depreciation, and Revaluation of Language Assets

The previous section emphasized the sources of income for language assets. This section will further explain why language assets do not necessarily appreciate steadily, and their returns are not automatically determined by language ability itself. Similar to general assets, the value of language assets depends on expected future income, and is also influenced by market demand, institutional environment, technological changes, and individual resource allocation capabilities. Therefore, pricing language assets must explain not only their income formation mechanism but also their risk exposure, depreciation potential, and option value.

First, language assets have risk exposure. Different language abilities face different market demands, and their returns are affected by factors such as the degree of national openness, industrial structure, job types, immigration policies, and the level of education. When an economy is more closely connected to external markets, and the demand for international trade and transnational services is higher, related language assets are more likely to obtain a premium; conversely, if language ability is out of sync with local industrial structure and job demands, its economic returns may be weakened. This shows that the value of language assets does not exist in isolation but must be combined with the specific labor market and fluctuate with changes in the external environment.

Second, language assets are subject to depreciation. While language skills can be developed through learning and accumulation, their market scarcity is not constant. As language education becomes more widespread and basic language skills transition from scarce to universally required, their wage premium may decline. Furthermore, as artificial intelligence, large language models, and automated communication tools reduce the cost of basic language conversion, some standardized language skills may face technological devaluation. Therefore,

the depreciation of language assets is not merely a matter of individual forgetting or skill decline, but also includes value compression due to decreased market scarcity and technological substitution.

Finally, language assets possess the uncertainty of option value. As pointed out in Section 2.2, language skills can offer long-term opportunities through online and real options, but these opportunities are not guaranteed to materialize. If external demand expands, language assets may provide new market entry and career transition opportunities; conversely, if the relevant market shrinks or technological substitution intensifies, their option value may decline. Therefore, option value is not an added guarantee of language assets, but rather a potential return that needs to be reassessed in a dynamic environment.

In conclusion, the key to pricing language assets is not only judging whether language skills are “useful,” but also assessing the magnitude of demand, scarcity, substitution risk, and future options in a specific market. The previous section discussed multiple cash flows, explaining how language assets generate income. This section discusses risks, depreciation, and value revaluation, further illustrating why these incomes differ, why they change, and why it is necessary to understand the long-term economic value of language competence from a dynamic allocation perspective.

1.4 Summary

This chapter explains the basic logic of the language asset pricing perspective from a theoretical standpoint. Language ability is not only human capital that enhances productivity, but also possesses the asset attributes of entering specific markets and creating long-term opportunities. Its economic returns derive from diverse return mechanisms such as information

arbitrage, operating income, and skill leverage, and are also influenced by market demand, institutional environment, technological changes, and individual allocation capabilities. Therefore, the economic returns of language ability should not be understood merely as a static wage premium, but rather as the result of language assets being priced and revalued under different market conditions.

2. Methods for Measuring, Valuing, and Identifying Language Assets

2.1 Measurement Dimensions and Valuation Basis of Language Assets

When studying the returns on language assets, the first challenge is defining and measuring language proficiency. Compared to years of education or income, language proficiency is more multidimensional and context-dependent, making it difficult to accurately characterize with a single indicator. From a language asset pricing perspective, measuring language proficiency not only describes whether an individual has mastered a language, but also provides a valuation basis for subsequently judging the market value, sources of income, and differences in returns of language assets.

Specifically, language proficiency is not simply the sum of basic skills such as listening, speaking, reading, and writing; it also includes more context-dependent aspects such as professional expression ability, cross-cultural understanding, and practical application ability. Different studies select different dimensions, essentially related to the form of their returns: studies focusing on income premiums often emphasize whether language proficiency can be translated into job access and productivity advantages; studies focusing on employment quality or occupational mobility often emphasize the comprehensive application of language proficiency in actual work scenarios.

Regarding measurement methods, existing literature generally adopts three paths. The first type is self-assessment, which involves respondents subjectively evaluating their language proficiency through questionnaires. The second type is standardized measurement, which measures language ability based on standardized tests or proficiency levels, such as TOEFL, IELTS, CEFR levels, or various national language tests. The third type is proxy variable measurement, which uses variables such as years of foreign language learning, language training experience, study abroad experience, or frequency of foreign language use at work to indirectly reflect an individual's language ability. These three methods constitute the most common measurement paths in existing research, corresponding to different data conditions and research objectives. Especially with the continuous development of automated language proficiency assessment, researchers have begun to attempt to more meticulously identify language proficiency through language feature cues, further illustrating the highly technical and multidimensional nature of language proficiency measurement (Bamdev et al., 2023).

Therefore, language proficiency is not a single, static, and easily standardized variable. Research on its economic returns must first clarify whether it measures actual usage ability, professional scenario ability, or signals that the labor market can identify and price. Only by clarifying the measurement dimensions can subsequent analyses of language asset returns, risks, and differences in returns have a comparable basis.

2.2 Applicability and Estimation Bias of Different Measurement Methods

While the three measurement approaches described above form the main methodological foundation of existing research, they differ significantly in their applicable scenarios, explanatory boundaries, and potential biases. From the perspective of language asset

valuation, different measurement methods are equivalent to observing the same asset from different angles: self-assessment is closer to an individual's subjective judgment of their own language assets, standardized measurement is closer to external ratings, and proxy variables reflect the input conditions in the language asset formation process. Therefore, when evaluating the returns on language assets, the reliability of the conclusions cannot be judged in isolation from the specific measurement method.

First, although self-assessment methods are highly subjective, they still have practical significance in large-scale labor force surveys. They can quickly obtain sample data and are suitable for identifying overall trends and group differences, but are more suitable for reflecting relative differences and should not be simply interpreted as a precise valuation of individual language abilities. Second, standardized measurement is more advantageous in identifying differences in ability levels, and therefore is often more persuasive when analyzing wage premiums, job thresholds, or the effects of educational investments. Standardized language assessment systems, represented by CEFR, IELTS, and TOEFL, are important bases for measuring general language proficiency in existing research (Ugli, 2025). However, such measurements are better suited to reflecting general language proficiency and may not fully cover actual expression, negotiation, and cross-cultural communication skills in complex work scenarios. Furthermore, while proxy variable methods simplify measurement, their interpretation requires greater caution. Variables such as years of study, training experience, and overseas study background reflect the investment base or usage opportunities for language asset formation, rather than being directly equivalent to the market value of language assets.

Furthermore, differences in measurement methods not only affect the size of the valuation results but also the interpretation of their meaning. Significant correlations derived from self-assessment data may reflect differences in actual ability or stronger self-efficacy and professional confidence; while conclusions drawn from test scores may indicate that language ability itself has market value or that employers value the screening signals represented by certificates. Therefore, for research on the returns of language assets, there is no absolutely optimal measurement method. A more reasonable approach is to select the measurement path that best matches the research objective, data conditions, and identification strategy, and to explain its applicable boundaries when interpreting the conclusions.

2.3 Measurement Error, Endogeneity and Causality Identification

In research on language asset returns, even if language ability can be measured, its causal impact on income and employment performance may not be directly identified. This is because language asset variables typically face both measurement error and endogeneity issues. Without addressing these problems, the observed language asset returns in a study may only represent correlations, not necessarily stable causal effects.

First, measurement error affects the accuracy of estimation results. Whether through self-assessment, standardized testing, or proxy variable measurement, it may not fully reflect an individual's actual language ability and usage level. If the variable's characterization of true language assets is biased, the regression results may underestimate or overestimate the impact of language assets on economic outcomes. Second, language ability is often not randomly formed but closely related to education level, family background, cognitive ability, career aspirations, and social resources. Therefore, the "language asset returns" observed in studies

may partially reflect not just language ability itself, but the combined effect of these unobserved factors. Furthermore, reverse causality may exist, where high-income positions or international work experience conversely promote an individual's language ability, thus obscuring the causal direction.

To address these issues, some studies employ more rigorous identification strategies, such as instrumental variable methods, fixed-effects models, and natural experiments. Instrumental variable methods attempt to identify the net effect of language proficiency using exogenous variables. Fixed-effects models reduce the bias of omitted variables by controlling for unobservable individual characteristics. Natural experiments utilize exogenous shocks such as policy changes, educational system adjustments, or changes in the immigration environment to examine the impact of changes in language proficiency on labor market outcomes. While these methods cannot completely eliminate all identification challenges, they typically provide evidence closer to causal explanations than simple correlation analysis.

Therefore, when understanding the returns to language assets, statistically significant correlations cannot be directly equated with stable causal effects. The stronger the identification power of the research design, the more persuasive its conclusions are generally. This is especially true when language assets simultaneously serve multiple functions such as productivity, screening, and signaling, where the difficulty of causal identification becomes more pronounced, and more careful interpretation is required.

Table 1

Comparison of Common Research Designs in Language Asset Return Studies

Research Design	Advantages	Common Limitations	Representative Issues
OLS	Simple and easy to explain	Endogenous bias	Confusing language ability with personal talent
IV	Causality can be identified theoretically	Instrumental variables have questionable validity	Policy changes may be accompanied by other economic shocks.
Fixed effects	Controlling for constant individual differences	Omitted variables when unable to handle	Language improvement is often accompanied by training and promotion.
Natural Experiments/Regression at Breakpoints	More transparent identification	Limited external validity	Difficult to promote in specific policy scenarios

2.4 Methodological Differences and Comparability of Asset Returns

Because language assets are highly complex in both measurement and identification, the conclusions drawn from different studies are often not entirely consistent. This difference does not necessarily indicate contradictory research, but rather reflects variations in data sources, variable design, and identification strategies. Therefore, when reviewing relevant literature, it is necessary to further discuss how methodological differences affect the comparability of research results.

First, differences in data sources and sample types directly impact research conclusions. National labor force surveys, immigrant samples, student samples, or industry-specific samples correspond to different language demand structures and labor market backgrounds, thus related studies often exhibit different strengths of returns and directions of action. Second, variable design also alters the interpretive direction of conclusions. Some studies treat language ability as a continuous variable, emphasizing the marginal effect of differences in ability levels; others classify it as an ordinal variable, which is closer to the logic of job selection and qualification access. Third, differences in econometric methods also make direct cross-sectional

comparisons difficult. Ordinary least squares is more suitable for identifying general correlations, but it tends to overestimate the returns of language assets when endogeneity exists; instrumental variable methods, fixed-effects models, and natural experiments, while providing more rigorous identification, are also more dependent on specific assumptions.

Furthermore, methodological differences also influence the observed mechanisms of action in research. If a study primarily measures certificate scores and test results, its findings may highlight screening and signaling functions; if a study focuses on the frequency of language use in the workplace, its findings may more closely approximate communication efficiency and productivity mechanisms; if a study focuses on immigrant samples, it is more likely to emphasize social integration and network expansion effects. Thus, research methods not only affect the “size of the results” but also “which aspect of language assets the study actually observes.”

Therefore, the risk-return characteristics of different types of language assets in Chapter Four cannot be understood in isolation from differences in research methods and sample backgrounds. Instead, the connections and boundaries between different conclusions should be judged based on measurement methods, identification strategies, and sample conditions.

2.5 Summary

Overall, the complexity of research on the returns of language assets stems not only from the multidimensionality and contextuality of language assets themselves, but also from the multiple challenges they face in empirical analysis, including measurement errors, endogeneity, and methodological choices. Differences in results arising from different measurement methods, variable settings, and identification strategies do not necessarily

indicate conflicting conclusions, but often reflect differences in research perspectives, sample backgrounds, and methodological approaches.

Therefore, when examining whether language assets have income premiums and employment-promoting effects, we cannot focus solely on the results themselves; we must also pay attention to how language assets are defined, measured, valued, and identified. The methodological discussion in Chapter 2 not only provides the necessary understanding for comparing the risk-return characteristics of different language assets in Chapter 3, but also lays the methodological foundation for analyzing the heterogeneity and risk factors of language asset returns in Chapter 4.

3. Risk-Return Characteristics of Different Types of Language Assets

As explained in the preceding theoretical analysis, the economic returns of language assets are not solely determined by wage premiums, but rather by a combination of income mechanisms, risk exposure, and value revaluation. Chapter 3 further points out that the measurement and identification methods of language asset returns can affect the comparability of research conclusions. Based on this, this chapter analyzes the market universality, scarcity, allocation value, and long-term options of three representative language assets: English proficiency, bilingual proficiency, and multilingual proficiency, and then compares the risk-return characteristics of different language assets.

3.1 English Proficiency: A Highly Liquid, Blue-Chip Language Asset

Among different types of language assets, English proficiency is closest to a highly liquid blue-chip asset. Its value stems from the widespread use of English in international trade, multinational corporations, and academic exchange. Existing research generally finds a

positive correlation between English proficiency and individual income and employment quality, especially in non-English speaking countries and highly internationalized industries where it is more likely to generate an income premium. However, the returns on English proficiency are also affected by the level of education availability and differences in job requirements; basic English proficiency may face marginal returns compression due to declining scarcity.

From the perspective of income and employment performance, English proficiency often exhibits a relatively stable income premium. Related research, starting from the demographic structure of the US labor market, also found a stable link between foreign language proficiency and wage returns (Lopez, 2024). In multinational corporations, export-oriented manufacturing, financial services, and information technology industries, English proficiency often directly affects job access and promotion opportunities, thus more easily translating into an income advantage. From the perspective of language assets, the value of English proficiency not only comes from improved communication efficiency but also enables individuals to enter a wider range of job markets using English.

Furthermore, the returns on English proficiency exhibit a clear hierarchical structure. Basic English skills typically only meet the needs of general information reading or simple communication, while advanced English skills enable individuals to undertake complex tasks such as international negotiations, project coordination, and overseas business expansion, thus generating higher added value returns. In other words, English proficiency is not simply a binary distinction of “can” or “can’t,” but rather tiered in its pricing based on proficiency and usage scenarios.

However, the returns on English proficiency are not equally significant in all situations. In industries with high localization and weaker demand for international communication, the marginal returns of English proficiency may be limited; as the overall prevalence of English education in a region increases, the scarcity of basic English skills decreases, and its benefits may be compressed. Therefore, while English proficiency possesses stability and universality, it also faces the risk of overcrowding due to increased supply.

3.2 Bilingual Competence: Language Asset Portfolio and Risk Diversification

Unlike English proficiency, which emphasizes market mobility through a single linguistic language, bilingualism is valued more closely at the level of a portfolio of language assets. Mastering two languages allows individuals to switch between different language markets, cultural contexts, and career opportunities, thereby improving job fit and labor market flexibility. Existing research indicates that bilingualism is closely related to the labor market performance and social integration of immigrant groups, influencing their employment opportunities and income (Churkina et al., 2023). Furthermore, the returns of bilingualism are not isolated but often complementary to education level, skill structure, and occupational background (Dudu, 2022). Therefore, the economic returns of bilingualism stem not only from the simple sum of two language skills but also from the synergistic effects formed between the portfolio of language assets and other skill sets.

First and foremost, bilingualism enhances an individual's ability to switch between different language markets. Monolingual workers typically compete only in a single-language environment, while bilingual workers can adapt to the demands of different language environments simultaneously, thus having a wider range of job fit. For immigrant groups,

bilingualism is particularly important: it not only helps maintain existing social networks but also facilitates entry into the mainstream labor market of the destination country, thereby improving employment opportunities and social integration.

The value of bilingual assets also lies in their complementarity with other forms of human capital. Bilingual ability itself does not automatically guarantee high returns; it only translates into an income advantage when combined with education level, professional skills, and work experience. Therefore, bilingual ability is more like a composite asset, its value derived from the synergy between language skills and other abilities, rather than a simple addition of two languages.

However, the returns on bilingual assets are also conditional. On the one hand, the market value of different language combinations varies; language combinations with strong economic standing or regional influence often yield higher returns. On the other hand, in work environments that do not rely on cross-language communication, bilingual ability is unlikely to translate into a significant income advantage. Overall, the core value of bilingual ability lies in enhancing market adaptability and risk diversification, while actual returns still depend on the specific language combination and job requirements.

3.3 Multilingual Capability: The Value of Growth Assets and Real Options

Compared to English and bilingual proficiency, multilingualism possesses greater characteristics of a growth asset and a real option. Its value lies primarily in the options for future market entry, cross-regional mobility, and career transitions. Existing research indicates a positive correlation between multilingualism and employment opportunities, occupational mobility, and income growth potential. Research from Ghana also found a significant link

between multilingualism and market labor outcomes (Atitsogbui et al., 2021). Therefore, the core value of multilingualism lies not in the number of languages spoken, but in its ability to be effectively combined with specific industry, job requirements, and professional skills.

Multilingualism is first manifested in stronger market entry power. With the accelerating global flow of capital, technology, and talent, more and more jobs require workers to possess cross-cultural collaboration and multilingual communication skills. Multilingualism enables individuals to move across broader geographical and professional spaces, thereby gaining access to more high-quality job opportunities.

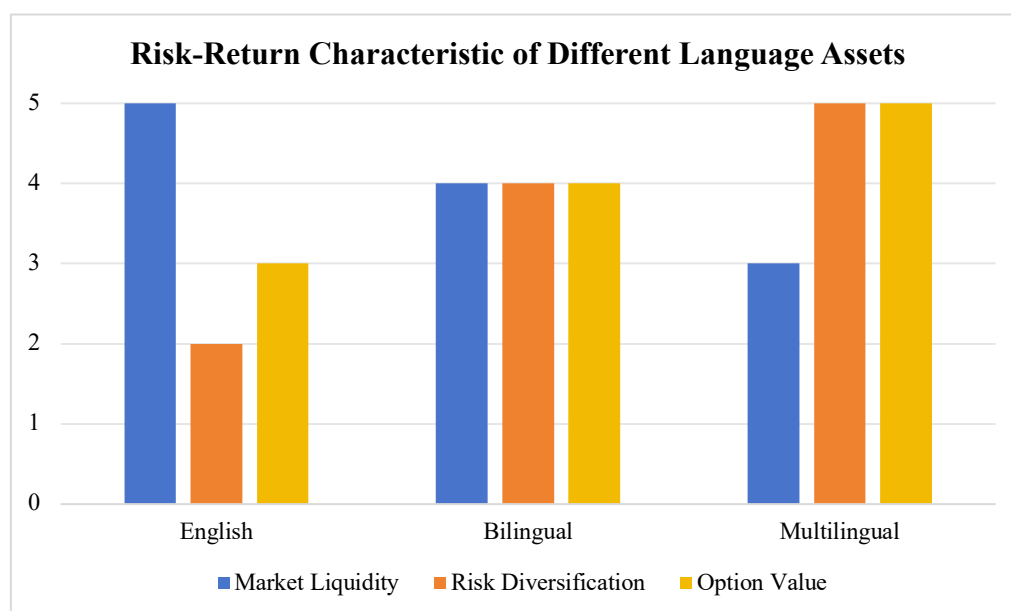
Secondly, the value of multilingualism stems from its ability to apply in complex scenarios. Multilingual individuals are better able to understand different cultural rules, institutional environments, and social interaction patterns, thus possessing a significant advantage in scenarios such as globalized corporate management, transnational project collaboration, and international market expansion. From a language asset perspective, multilingualism is closer to a growth asset: it may not immediately bring a stable wage premium, but it increases an individual's likelihood of participating in complex tasks and entering new markets.

Furthermore, multilingualism also possesses a certain real option value. Compared to workers relying solely on a single language environment, multilingual individuals typically have a wider range of career choices and can adjust their employment direction when opportunities in a particular region or industry shrink. This value is more reflected in the options for career transitions, inter-regional mobility, and future market entry.

However, multilingual assets do not appreciate indefinitely with the increase in the number of languages spoken. The labor market typically does not pay for the “number of languages themselves,” but rather for the “language skills that match the job requirements.” If additional language acquisition lacks practical application scenarios or cannot be combined with professional skills, its economic returns will be limited. Therefore, the true value of multilingual ability lies not in the mechanical increase in the number of languages spoken, but in its ability to form a strategic configuration oriented towards professional scenarios, industry needs, and professional skills. Based on the above analysis, English proficiency, bilingual ability, and multilingual ability exhibit different characteristics in terms of market liquidity, risk diversification, and option value, which can be summarized in Figure 2.

Figure 2

Risk-Return Characteristic of Different Language Assets



Note: This figure is a conceptual comparison based on the literature review and theoretical analysis. Scores indicate relative strength rather than empirical estimates.

3.4 The Empirical Basis and Boundaries of Financial Metaphors

It should be noted that the concepts of “blue-chip assets,” “language asset portfolio,” and “real options” used in this paper for English proficiency, bilingualism, and multilingualism are primarily based on theoretical derivations and indirect evidence from existing literature, rather than rigorous financial econometric tests. Currently, empirical studies directly calculating the correlation matrix of returns for different language proficiency levels are still limited, and there is a lack of systematic calculations of the “risk-adjusted return” of bilingualism. For example, existing research rarely reports the correlation coefficients of returns for different language combinations such as English and Spanish, English and Chinese, and Mandarin and dialects, which makes the calculation of “risk diversification” or “hedging effects” lack a sufficient empirical basis.

Similarly, the “real option value” of multilingualism is currently largely derived from theoretical inferences. The so-called real option value refers to the new options that multilingualism may provide in future market changes, regional cooperation, cross-border mobility, or career transitions. However, in existing research, these options are often difficult to measure directly; researchers usually can only judge them through indirect indicators such as occupational mobility, expansion of employment opportunities, or income growth potential.

Therefore, the “blue-chip-portfolio-option” framework presented in this paper should be understood as a heuristic analytical tool rather than a fully validated empirical rule. Future research could further utilize panel data to calculate the correlation between the returns of different language assets, draw on risk-adjusted return indicators from finance, compare the return stability of different language portfolios, and observe how the value of language assets is repriced through exogenous events such as language policy adjustments, changes in

education systems, or the impact of artificial intelligence technology. Only on the basis of these empirical studies can the language asset pricing framework further develop from an explanatory analogy into a more rigorous empirical analytical framework.

3.5 Summary: Risk-Return Structure of Different Language Assets

As shown in Figure 2, English proficiency, bilingualism, and multilingualism can all generate economic returns, but their risk-return structures differ. English proficiency is closer to highly liquid blue-chip language assets, typically possessing strong versatility and relatively stable returns. Bilingualism is more akin to a language asset portfolio, its value lying in cross-language market switching, risk diversification, and complementary skills. Multilingualism, on the other hand, exhibits characteristics more akin to growth assets and real options, with returns depending on future market opportunities, career demands, and the degree of alignment with professional skills. Therefore, different language assets cannot be compared solely based on “high or low returns,” but rather their differences should be understood from dimensions such as versatility, scarcity, alignment, and long-term options. Furthermore, even for the same language asset, returns can vary depending on market conditions, industry factors, and individual allocation capabilities—a topic that will be discussed in the next chapter.

4. Heterogeneity and Risk Factors in Language Asset Returns

4.1 Market Pricing of National Environmental and Language Assets

The returns on language assets are not presented in the same way in all countries, but rather depend primarily on the market environment. Different countries have different dominant languages, levels of openness, industrial structures, and institutional arrangements, resulting in different prices for the same language asset in different labor markets. Therefore,

this section focuses on analyzing how the national environment affects the market pricing of language assets and explaining why the same language proficiency may generate different forms of economic returns in different countries.

In English-speaking countries, mainstream research focuses more on the relationship between the language proficiency of immigrants or minority groups and their labor market performance. Since English is already the dominant language in the labor market, the return on language proficiency is mainly reflected in whether or not one meets the mainstream market entry standards. For immigrant workers, insufficient English proficiency not only affects their employment opportunities but also limits their ability to enter high-skilled positions and achieve career advancement. In other words, in English-speaking countries, the return on language proficiency is more of an “integration return,” focusing not on the premium brought by additional international language mastery, but on the ability to enter the mainstream labor market. In contrast, research from Rwanda shows that different foreign language skills yield different returns in the same labor market, with English proficiency yielding significantly higher returns than French. This illustrates that the economic value of language skills is closely related to market position in a specific country (Muhawenayo et al., 2022).

In contrast, in non-English speaking countries, especially in more open economies, English proficiency often carries a stronger wage premium and career returns. This is because English is typically not a universally accepted basic skill in the labor market in these countries, but rather a scarce additional skill. Workers proficient in English not only gain access to more internationalized industries and companies but also have easier access to overseas information, participate in cross-border cooperation, and earn higher incomes. Therefore, in non-English

speaking countries, the economic value of English proficiency is often reflected more as a “value-added return.”

Furthermore, in developing countries, the economic returns of language skills often have a more structural character. On the one hand, foreign-invested enterprises, international organizations, and high-end service industries tend to rely more heavily on language skills, enabling workers with foreign language advantages to enter high-income sectors more quickly. On the other hand, due to the uneven distribution of educational resources and language training opportunities, language proficiency itself can also become an important indicator of social stratification. This means that in developing countries, language proficiency is not only a labor skill but can also be a significant factor exacerbating income inequality and opportunity disparities.

Therefore, the key to how national environment influences the economic returns of language assets lies in its determination of their fundamental pricing. For example, English proficiency in English-speaking countries is closer to the “entry standard” of the mainstream labor market, while in non-English-speaking countries it is more likely to generate a premium. In developing countries, this is further compounded by factors such as educational opportunities, social class, and institutional barriers. Thus, the value of language assets is primarily a relative price embedded in a specific market environment, rather than a fixed return detached from national context.

4.2 Industry Structure and Industry Factors of Language Assets

The national environment determines the overall market price of language assets, while industry structure further determines whether they can be converted into a pay premium in

specific positions. Even within the same country, different industries and occupations exhibit significant differences in their reliance on language skills. Research based on online job advertisements also shows that the demand for language skills is unevenly distributed across occupations and regions, providing direct evidence for understanding the industry heterogeneity of language asset returns (Marconi et al., 2023). From the perspective of language asset pricing, industry structure can be understood as an “industry factor” influencing language asset returns: export-oriented industries such as international trade, financial services, air transport, and cross-border e-commerce have higher exposure to language factors, thus making language assets more likely to generate a pay premium.

In industries with a high degree of internationalization, language assets typically have higher market value. For example, international trade, cross-border e-commerce, financial services, tourism services, air transport, diplomatic affairs, and some information technology industries often require workers to possess strong foreign language communication skills and cross-cultural collaboration abilities. In these industries, language proficiency not only affects an individual’s ability to enter relevant positions but also directly relates to their job performance and promotion opportunities. Therefore, language skills typically yield higher returns in these industries and are more likely to translate into significant wage premiums. Review studies in the healthcare industry also indicate that multilingualism is more prominent in the labor market for occupations such as immigrant nurses, further illustrating that the value of language skills is often highly dependent on specific industry contexts (Perschina, 2025).

In contrast, in industries with high localization and low demand for international communication, the marginal returns to language skills tend to be lower. In these contexts,

while language skills may have a certain advantage, they are usually not the core factor determining income disparities. Furthermore, job level also affects the form of returns on language assets: in low-skilled or highly standardized positions, language skills are more reflected in basic communication functions; while in high-skilled, knowledge-intensive, or managerial positions, language skills are more easily combined with professional skills, transforming into negotiation, writing, coordination, cross-cultural judgment, and professional output abilities, thus generating higher-level wage premiums. As the research emphasizes, language ability is increasingly manifesting as a “tool language” that can be combined with specific occupational, professional, and skill scenarios (Li & Li, 2024). Therefore, the key to the impact of industry factors on the return on language assets lies not in whether the industry “needs language,” but in whether language ability can be embedded in specific job requirements and transformed into actual productivity.

4.3 Individual Characteristics and Language Asset Portfolio Management Capabilities

The returns on language assets depend not only on external market and industry demand, but also on an individual’s ability to effectively combine language skills with professional skills, social resources, and career paths. In other words, language ability itself does not automatically generate returns; what truly influences its profitability is an individual’s ability to manage and combine language assets. Different levels of education, professional backgrounds, social networks, and family resources all affect the usage scenarios and conversion efficiency of language assets. Therefore, this section will analyze why the returns on language assets differ among different workers, starting from individual ability combinations and resource conditions.

First, education level significantly affects the degree of return on language skills. Generally speaking, individuals with higher levels of education are more likely to convert language skills into higher-level professional earnings. This is because highly educated individuals are typically able to more effectively utilize language skills to acquire professional information, participate in complex communications, and undertake high-value-added tasks. In contrast, workers with lower levels of education, even if they possess certain language skills, may find it difficult to fully realize the economic value of their language skills due to limitations in job level. Therefore, the relationship between language ability and education level is not a simple additive one, but more likely a complementary one.

From the perspective of language assets, language proficiency itself is more of an “amplifier”: it doesn’t determine individual income alone, but rather enhances the market value of existing skill sets through combination with education, professional skills, and social networks. Causal studies based on Mexican data also show that foreign language education not only affects an individual’s language proficiency itself but also further influences their employment and income outcomes. This indicates that the economic returns of language proficiency are often embedded in educational background and skill combinations, rather than occurring in isolation (Galvez-Soriano, 2025).

Furthermore, an individual’s social background also affects the efficiency of language asset conversion. For immigrant groups, ethnic minorities, or transregional migrants, language proficiency not only affects work efficiency but also social integration, identity transformation, and career advancement paths, thus potentially leading to stronger returns. However, for local workers already in a mainstream language environment, the marginal returns from additional

language assets may be relatively limited. Gender, urban/rural backgrounds, and family resources also influence an individual's language learning opportunities, language certification acquisition capabilities, and career path choices, thereby affecting the actual returns of language assets.

Therefore, the returns on language assets are not an automatic result independent of individual differences but rather a conditional benefit highly dependent on an individual's ability to allocate resources. Language skills may be a crucial asset for career advancement for some, while for others they are merely a limited auxiliary skill. Therefore, what truly determines their value is whether language skills can be integrated into appropriate education and career paths.

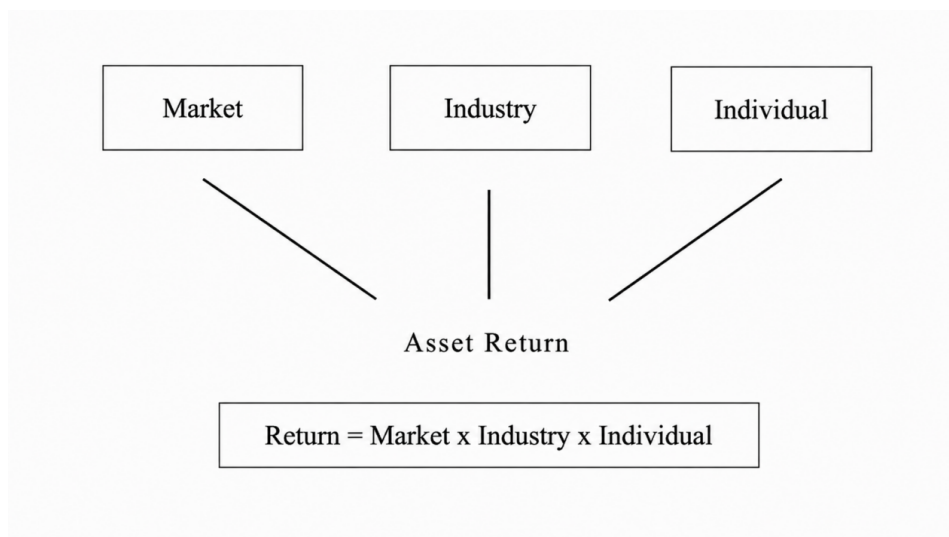
4.4 Market Environment—Industry Factors—Individual Allocation Capability: A Unified Analytical Framework

The preceding analysis indicates that the differences in language asset returns are not caused by a single factor, but rather shaped by the national environment, industry structure, and individual allocation capabilities. The national environment determines the base price of language assets in a specific labor market; industry structure determines whether language assets can generate a premium in specific positions; and individual allocation capabilities determine whether language assets can be combined with education, professional skills, and social resources to achieve transformation. Therefore, the heterogeneity of language asset returns should be understood as the pricing result of multiple factors, rather than the inherent fixed value of language ability itself. Based on this logic, this paper integrates the above factors

into a unified analytical framework of “market environment—industry factors—individual allocation capability.”

Figure 3

Multi-Tiered Pricing Framework for Language Asset Returns



As shown in Figure 3, the return on language assets is not determined by a single factor, but rather by a dynamic pricing outcome resulting from the combined effects of market environment, industry factors, and individual allocation capabilities. The market environment determines the base price of language assets—whether a language is an entry requirement, a scarce resource, or a selection tool in a specific country or region. Industry factors determine the premium of language assets—whether language skills can be translated into productivity, communication efficiency, and career opportunities in specific industries and positions. Individual allocation capabilities determine the monetization efficiency of language assets—whether an individual can effectively combine language skills with education, professional skills, social networks, and career paths.

This framework indicates that the value of language assets is not a fixed attribute inherent in language itself, but a relative price formed under specific market, industry, and individual conditions. National differences, industry differences, and individual differences are not isolated but rather the result of language assets being priced at different levels. Therefore, the return on language assets is constantly restructured with the spread of education, industrial adjustments, changes in labor market rules, and technological advancements. Understanding this structural and dynamic nature provides a logical starting point for the subsequent analysis of the revaluation of language assets by artificial intelligence.

4.5 Pricing of Language Assets in the Chinese Context

In the Chinese context, the pricing of language assets possesses strong unique characteristics. The Chinese labor market exhibits a multi-layered linguistic structure, encompassing the national common language, local dialects, English proficiency, and minority languages. Therefore, the return logic for language assets centered on English-speaking or immigrant societies cannot be simply applied. Different language assets in China differ in market liquidity, access functions, social capital value, and non-market value. Based on the framework of “market environment—industry factors—individual allocation capability” mentioned earlier, different language assets in the Chinese context can exhibit different pricing methods.

First, Mandarin is closer to a basic access-type language asset. In the Chinese labor market, Mandarin is not only a basic communication tool but also a crucial foundation for entering public services, education, media, and commercial services. Existing research has found that Mandarin proficiency significantly impacts the quality of employment, indicating

that Mandarin has a strong screening and access function in the domestic market (Wang, 2021). However, the market value of Mandarin is primarily concentrated in the domestic labor market, unlike English, which possesses global liquidity. Therefore, Mandarin is more appropriately understood as a basic access asset in the Chinese labor market rather than a global blue-chip asset.

Second, dialects can be understood as regional linguistic assets. In regions like Guangdong, Fujian, and Shanghai, dialects such as Cantonese, Minnan, and Shanghaiese still possess specific social capital value, helping individuals integrate into local business networks, community relationships, and regional cultural environments. For some local service industries, business negotiations, and social interactions, dialect proficiency may offer advantages in relationship access and trust building. However, dialect assets have low liquidity; their value is often limited to a specific region, with limited cross-regional monetization capabilities. With increased population mobility and the growing prevalence of Mandarin, some dialect assets may also face depreciation risks due to weakened intergenerational transmission and shrinking usage scenarios.

Third, English possesses dual asset attributes in the Chinese context. On the one hand, as an international linguistic medium, English helps workers enter multinational corporations, foreign trade, finance, education, science and technology, and international exchange scenarios, possessing strong global liquidity value. On the other hand, English proficiency in China is often related to family background, educational resources, and school level, thus potentially serving as a signal of social stratification. In other words, the returns on English language assets observed in China may not entirely stem from productivity gains in English proficiency itself,

but may also partially reflect differences in educational opportunities, family resources, and social background. This further illustrates that research on language asset returns needs to be wary of the mixture of signaling effects and real productivity effects.

Fourth, minority languages possess strong non-market value. In some minority areas, minority languages contribute to local social integration, cultural preservation, and identity building, and may also play a role in grassroots governance, ethnic education, cultural tourism, and local public services. However, in terms of market liquidity and cross-regional monetization capabilities, the economic returns of minority languages are generally less pronounced than those of Mandarin and English. If the value of minority languages is evaluated solely from the perspective of income premium, it may be underestimated. Therefore, language asset pricing frameworks also need to acknowledge their limitations: not all language value can be fully reflected in labor market prices; non-market values such as cultural preservation, identity building, and social integration are equally important.

Thus, the returns on language assets in the Chinese context are not a simple ranking relationship, but rather a differentiated pricing outcome for various language assets at different market levels. Mandarin emphasizes domestic access, dialects emphasize regional social capital, English serves as a signal of global mobility and social stratification, while minority languages possess strong non-market value. This analysis also suggests that a language asset pricing framework can only accurately explain the economic returns of language proficiency when combined with specific national and institutional contexts.

5. The Impact of Artificial Intelligence and the Revaluation of Language Assets

5.1 Technical Devaluation: Compression of Returns on Underlying Language Assets

With the development of neural machine translation, generative artificial intelligence and large language models, traditional language barriers are being weakened by technological means. From the perspective of language asset pricing, this change first changes the scarcity of basic language assets. In the past, mastering a foreign language, especially English, often meant being able to cross information barriers, complete cross-language communication, and obtain higher-level career opportunities. Therefore, basic language ability itself has a certain scarcity premium. However, as translation tools and intelligent generation tools become increasingly popular, the economic returns that partially rely on basic language conversion capabilities are being compressed.

Existing research has also shown that machine translation and large language models do not affect all language tasks uniformly, but are more likely to affect standardized, repetitive and rule-clear language work. In other words, artificial intelligence first changes the cost structure of the basic language conversion task, rather than directly eliminating the value of all language assets. Therefore, the “technical depreciation” mentioned in this article mainly refers to the decrease in scarcity of basic language assets in some low-threshold tasks, rather than the overall loss of economic significance of language ability.

This compression is mainly reflected in standardized language tasks. For tasks such as text understanding, information retrieval, simple expressions, and email communication, artificial intelligence translation tools can already provide immediate support at a lower cost, thereby reducing workers’ dependence on basic foreign language skills. In other words, tasks that in the past could only be completed by workers with certain language proficiency, such as

reading simple foreign language materials, conducting basic cross-language communication, processing routine translation texts, etc., are being replaced by general-purpose technical tools.

In this context, the technical devaluation of basic language assets means that the return space for low-threshold, repetitive and standardized parts has been compressed. In the future, the labor market will place more emphasis on whether language ability can enter more complex communication, judgment and collaboration scenarios. As a result, the value focus of language assets begins to shift from basic conversion abilities to higher-order understanding, expression and judgment abilities.

5.2 Complementary Value-Added: Meta-Skills of High-Level Language Assets

While artificial intelligence (AI) diminishes the scarcity of basic language assets, this doesn't mean language assets are depreciating overall. On the contrary, in complex work scenarios, higher-order language assets are transforming from simple communication tools into "meta-skills." Meta-skills refer to the ability to not only directly express oneself verbally but also to organize, coordinate, and amplify the effectiveness of other skills (Wei et al., 2026).

With AI's widespread involvement in information processing and content generation, the importance of higher-order language assets becomes even more pronounced. Language use in complex work often involves more than just "correct translation"; it also encompasses higher-level abilities such as contextual judgment, cultural understanding, logical organization, expression strategies, and risk control. For example, in scenarios like international business negotiations, legal text processing, brand communication, and cross-cultural management, language proficiency not only concerns the literal transmission of meaning but also determines

whether information can be accurately understood, effectively expressed, and conform to specific cultural norms.

Simultaneously, the effective use of AI tools itself requires workers to possess strong language organization skills. Whether it's issuing high-quality instructions, filtering generated content, or modifying, correcting, and reconstructing AI output, it all relies on the user's comprehension, expression, and judgment. Therefore, high-level language assets no longer function independently, but are gradually shifting towards becoming "collaborative assets" with artificial intelligence: they enhance value through human-machine collaboration by helping individuals better use, supervise, and refine AI tools.

Thus, AI has not eliminated the value of high-level language assets; rather, it has increased their relative importance. What will truly be scarce in the future is not just "mastering a language," but the ability to express oneself effectively, achieve complex understanding, make cross-cultural judgments, and collaborate with humans using technological support.

5.3 Reward Structure Restructuring: Layering, Scenario-based, and Composite

Based on the aforementioned changes, the impact of AI on the value of language assets is not a simple replacement or reinforcement, but rather a comprehensive restructuring of the return structure of language assets in the labor market. Analysis of AI exposure levels across occupations and industries reveals that the impact of language models on different positions is not balanced, but rather concentrated in text processing, information integration, and language generation-intensive occupational tasks (Felten et al., 2023). This indicates that the impact of AI on the returns of language assets is not a simple replacement, but rather a fundamental shift in the market value of different language tasks. Basic language assets are more susceptible to

technological assistance and substitution, while advanced language assets may gain new complementary value in complex expressions, professional judgment, and human-machine collaboration. Specifically, the returns on language assets are shifting from a relatively universal skill premium to a more stratified, scenario-based, and composite structural return.

First, the stratification of language asset returns may further intensify. Basic language assets primarily serve information conversion, routine expression, and standardized communication, making them more susceptible to substitution and assistance from AI, thus compressing marginal returns. In contrast, advanced language assets, embedded in knowledge-intensive, cross-cultural collaborative, and high-risk decision-making roles, emphasize complex understanding, precise expression, contextual judgment, and relationship coordination. Therefore, they are more likely to be concentrated in these high-value-added areas and command a relative premium.

Secondly, the returns on language assets may become more scenario-based. The future labor market will value not so much the abstract level of language proficiency, but rather whether language skills can be embedded in specific work scenarios and play a practical role. The same language ability may generate completely different economic returns in different scenarios such as international negotiations, professional writing, client communication, and technical collaboration. Therefore, the value of language assets increasingly depends on task complexity, job level, and specific usage scenarios.

Finally, the returns on language assets will become more complex. In the age of artificial intelligence, language assets no longer rely solely on basic skills to generate value; instead, they need to be combined with professional knowledge, cross-cultural judgment, and

AI application capabilities. In the digital age, language skills are increasingly combined with technology, expertise, and scenario applications, and their value is more reflected in complex abilities rather than single language skills (Wei et al., 2026). Therefore, the high returns of language assets will be more reflected in the combination of “language ability + professional ability + technical collaboration ability.”

5.4 Shift in Evaluation System: Reassessment of the Signaling Function of Language Assets

AI is not only changing the practical use value of language assets, but also altering how the market identifies and evaluates them. In the traditional labor market, the economic value of language skills is primarily identified in two ways: their instrumental function in actual work and observable ability signals manifested through language certificates, exam scores, etc. However, with the widespread involvement of AI in basic language tasks, the focus of language asset evaluation is shifting from “whether one possesses basic communication skills” to “whether one can achieve high-quality application in complex situations.” Research on the impact of machine translation technology also indicates that machine translation is changing the demand structure for language skills among language professionals and the broader labor market, providing a realistic basis for the shift in the logic of language asset evaluation (Borgonovi et al., 2023).

First, the focus of language asset evaluation is shifting from static skill measurement to dynamic application ability identification. Vocabulary size, grammatical accuracy, and exam scores remain important, but they represent more of a basic ability; what truly reflects the value of high-level language assets is an individual’s ability to express, judge, and coordinate in

complex tasks. Cross-cultural understanding, contextual judgment, complex expression, critical filtering, and the correction and reconstruction of AI output are becoming increasingly important evaluation dimensions that better reflect the value of language assets.

Secondly, the signaling function of language assets is also being reassessed. As technology increasingly replaces basic language functions, employers may no longer view language proficiency merely as a direct work tool, but rather as an outward signal of learning ability, cognitive ability, expressive ability, and international adaptability. In other words, the significance of high-level language assets and related certifications depends not only on whether they are essential for completing daily tasks, but also on the information they convey to the market regarding an individual's comprehensive qualities and adaptability to complex tasks.

Therefore, in the context of artificial intelligence, the labor market return on language assets depends not only on whether they still possess instrumental value, but also increasingly on how the market redefines their value boundaries through new evaluation standards and signaling mechanisms. The language asset evaluation system needs to place greater emphasis on the ability to effectively use language in professional scenarios, complex tasks, and human-machine collaboration.

5.5 Summary

Overall, artificial intelligence has not simply diminished the economic value of language assets, but rather restructured their pricing logic. Basic language assets face technological devaluation in standardized, repetitive tasks, shrinking their traditional benefits;

while higher-level language assets, involving complex communication, cross-cultural judgment, and human-machine collaboration, gain stronger complementary value.

As a result, the returns on language assets are shifting from general skill premiums to tiered, scenario-based, and composite structural returns. In the future, the value of language assets will no longer primarily depend on whether an individual possesses a particular language, but rather on whether their language ability can be combined with professional skills, technological tools, and complex task scenarios, and be re-identified and priced by the market within a new evaluation system.

Conclusion

This paper systematically examines the economic returns of language proficiency from the perspective of language asset pricing. Unlike traditional research that primarily views language proficiency as human capital, this paper further emphasizes its asset attributes: it requires upfront investment, generates future returns, and is influenced by market demand, industry structure, institutional environment, technological changes, and individual allocation capabilities. Therefore, the economic returns of language proficiency should not be understood merely as a static skill premium, but rather as the result of language assets being priced, revalued, and allocated under different market conditions.

From the perspective of return mechanisms, the returns of language assets do not come from a single channel, but are composed of mechanisms such as information arbitrage, operational income, skill leverage, market access, network options, and real options. Language proficiency can improve information acquisition and communication efficiency, amplify the market value of education, professional skills, and career experience, and help individuals

access a wider range of positions, social networks, and future markets. However, these returns do not arise automatically; their measurement and identification are also influenced by the dimensions of language proficiency, measurement methods, variable settings, and causal identification methods. Therefore, when discussing the returns of language assets, it is crucial to consider not only whether they bring income and employment advantages, but also how these returns are valued, identified, and interpreted.

From a type perspective, different language assets possess different risk-return structures. English proficiency is closer to highly liquid blue-chip language assets, exhibiting strong market universality and stable returns; however, basic English proficiency may face compressed returns as English education becomes more widespread. Bilingual proficiency is more akin to a language asset portfolio, its value stemming from the combination of two language skills, as well as cross-language market switching, risk diversification, and complementary abilities. Multilingual proficiency exhibits characteristics of growth assets and real options; its returns are not necessarily immediately reflected in wage premiums, but rather in future market entry, career mobility, and long-term options. Therefore, language assets cannot be compared solely based on “high or low returns,” but should be understood from dimensions such as universality, scarcity, matching degree, and long-term options.

Based on the differences in returns, the value of language assets is a dynamic pricing outcome formed under the combined influence of market environment, industry factors, and individual allocation capabilities. The market environment determines the basic price of language assets, industry factors determine whether language assets can generate a premium in specific positions, and individual allocation capabilities determine whether language assets can

be combined with education, professional skills, social resources, and career paths to achieve transformation. Therefore, the same language ability may generate different returns in different countries, industries, and among different individuals. These differences are not accidental, but rather the result of language assets being repriced under different conditions.

The development of artificial intelligence has further driven the revaluation of language assets. Basic language assets face technological depreciation in standardized, repetitive, and low-barrier tasks, and their scarcity and some wage premiums may be compressed. Advanced language assets, however, gain stronger complementary value due to their involvement in complex expressions, contextual judgment, cross-cultural understanding, professional application scenarios, and human-machine collaboration. Future returns on language assets will depend on their ability to combine language skills with professional skills, technological tools, and complex task scenarios, and to be recognized and priced by the market within a new evaluation system.

However, the language asset pricing framework proposed in this paper still has certain limitations. First, language assets differ from financial assets; they cannot be freely traded in the secondary market, and it is difficult to form a continuous, transparent, and standardized market price. Secondly, the classification of English proficiency, bilingualism, and multilingualism into “blue-chip assets,” “language asset portfolios,” and “real options” in this paper is primarily a theoretical explanatory framework and currently lacks sufficient direct empirical testing. Thirdly, the impact of artificial intelligence on the value of language assets is still in a rapidly evolving phase, and relevant empirical research is insufficient. Therefore, the analysis of technological depreciation and complementary value enhancement in this paper

is more suitable as a trend judgment than a definitive conclusion. Future research needs to further examine the formation mechanism and changing trends of language asset returns through more rigorous causal identification, long-term panel data, and cross-national comparative studies.

Overall, the economic returns of language proficiency are shifting from “mastering a skill” to “allocating an asset.” For individuals, language learning should not only pursue certificates or basic proficiency but should focus on the matching of language proficiency with professional direction, industry needs, and career paths. For research, future research should further focus on the causal identification of language assets, risk-adjusted returns, the allocation value of different language combinations, and the changes in the language asset evaluation system under the background of artificial intelligence. Only by adopting a unified framework of returns, risks, depreciation, allocation, and revaluation can we more accurately understand the value formation and changes in returns of language assets in the modern labor market.

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