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From Resource Constraints to Strategic Flexibility: Drivers of Gig Worker Adoption among Accounting Firms Serving Agricultural Enterprises in China

Zhu Cheng ^{ORCID}, Shahifol Arbi ^{*} ^{ORCID}, Mohd Hadzrami ^{ORCID}

College of Business, Universiti Utara Malaysia, Sintok 06010, Malaysia

ABSTRACT

China's Rural Revitalization Strategy has seen rapid growth in new agricultural business entities. However, the rural-urban divide in professional services remains an impediment to their development. The emergence of the gig economy presents an opportunity to address the rural-urban divide in professional services. The study aims to investigate factors that affect Chinese accounting firms' intention to hire gig workers to serve agricultural enterprises. The study combines Transaction Cost Economics, Resource-Based View, and Theory of Planned Behavior. The study investigates five antecedents: cost reduction, access to skills, flexibility demand, focus on key competencies, and regulatory compliance. Firm size is tested as a moderator. The pilot study provided 98 valid responses from accounting firm partners and managers across ten cities in China. The results from the PLS-SEM (Partial Least Squares Structural Equation Modeling) model indicate that cost reduction, skills access, flexibility demand, and core capabilities focus positively influence hiring intention, while regulatory compliance challenges negatively influence hiring intention. Firm size moderates these relationships by showing that smaller practices are sensitive to cost and capability drivers, and larger firms are less sensitive to regulatory compliance challenges. The research contributes to the field of research on the agricultural socialized service system by showing the role that platform-mediated professional services play in increasing service accessibility for new agricultural business

*CORRESPONDING AUTHOR:

Shahifol Arbi, College of Business, Universiti Utara Malaysia, Sintok 06010, Malaysia; Email: arbi@uum.edu.my

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entities and thus contributing to the credit and operation efficiency that is necessary for the modernization of the agricultural economy.

Keywords: Rural Revitalization; Gig Economy; Professional Service Accessibility; New Agricultural Business Entities; PLS-SEM

1. Introduction

The progress achieved by China's Rural Revitalization Strategy leads to a basic conflict in agricultural development in which, on one side, a huge number of new agricultural business entities such as family farms, farmer cooperatives, and agricultural enterprises have emerged quickly; on the other side, they have very limited access to professional accounting services necessary for advanced financial management. As of 2023, agricultural contributions accounted for 8.96 trillion RMB in China's GDP, with more than 3.9 million family farms and 2.2 million farmer cooperatives operating in the country (Ministry of Agriculture and Rural Affairs, 2024). Furthermore, these agricultural business entities face serious challenges in gaining access to high-quality accounting services, including a serious talent gap in rural regions where specialists are less accessible in rural regions, peak demand in accordance with agricultural production cycles, and requirements of specialized documents such as those for complying with subsidies, dealing with cooperative taxes, and valuing biological assets, which need higher-level access and expertise not offered by common accounting service providers^[1, 2].

The gig economy—focusing on short-term task work facilitated by online platforms—is estimated to have become a reality for 4.4 to 12.5% of the global working population^[3]. Although rather new in nature, this phenomenon has increasingly influenced knowledge-driven sectors, making them a possible solution to bridge the gap in professional service access in rural and agricultural settings. For example, with reference to Chinese agricultural accounting services, it can be noted that the gig workers constitute a professional group, which is distinct from the low-skilled platform workers who are often associated with delivery or transportation work. The group comprises individuals who are certified by the state as Certified Public Accountants, who

work as independent consultants; semi-retired experienced senior accountants who want to work with urban accounting firms on a flexible basis; accounting specialists who have knowledge related to biological asset valuation and cooperative taxation, which is provided by agricultural universities; experienced accounting practitioners who used to work in agricultural bureaus or rural credit cooperatives. The intermediaries in this sector include Zhubajie and accounting networks. The specialized nature of agricultural accounting, which entails government subsidy compliance, cooperative member equity accounting, and the measurement of biological assets in line with Chinese Accounting Standards, means that the credentials and expertise of gig workers far exceed what is required in traditional platform-based task work and lend credence to the concept of the Resource-Based View in relation to the ability to leverage access to rare and valuable human capital. Platforms can create a feasible setting wherein specialists based in urban regions can access geographically scattered agricultural clients and support peak demand in an efficient manner without being based in agricultural regions permanently^[4]. However, studies have largely focused on gig economy work in their capacity to address worker aspects rather than managerial decisions within professional service settings, especially with regard to improving access to professional services in agricultural regions using such a platform.

A conceptual model with five antecedents—cost reduction, access to skills, demand for flexibility, focus on core capabilities, and challenges of regulatory compliance—is proposed to influence gig worker recruitment intent, with firm size moderating this relationship. The proposed model incorporates Transaction Cost Economics, which describes under which circumstances outsourcing outperforms employing in-house staff^[5]; Resource-Based View, which shows under which circumstances an augmentation of capabili-

ties attracts from external talent access^[6]; and Theory of Planned Behavior, including attitude-driven decisions in workforces^[7, 8]. Analysis of pilot-test results among 98 accounting firms in ten Chinese cities utilizes PLS-SEM analysis^[9, 10]. This research adds to the literature on socialized service systems in agriculture by using gig economy approaches to improve professional service reach for new agricultural enterprises. The findings can be applied in practice to improve rural professional service delivery in line with Rural Revitalization.

Professional service accessibility is a factor that promotes agricultural modernization in an interrelated manner via credit access facilitated by accurate document submission^[11, 12], support for participation in subsidy schemes^[13, 14], enhanced business efficiency facilitated by professional financial management expertise^[15, 16], and enhanced cooperative fundamentals. The gig economy platform with gig jobs activates this factor by increasing the coverage area for professional service delivery.

2. Literature Review and Hypotheses Development

2.1. Agricultural Socialized Services and the Professional Talent Gap

Agricultural socialized services are an essential basis for contemporary agricultural growth and include production, technological, financial, and managerial support, which individual farming entities are unable to provide themselves effectively. Professional accounting work remains an increasingly important but understudied part of this basis, given the complex financial management requirements of new agricultural business organization forms in order to gain access to credit, fulfill support programs, and reach efficiency in their operations^[17]. As part of China's agricultural development strategy, developing integrated agricultural service systems remains a highly emphasized part of Chinese policies in order to facilitate a transition towards large, specialized agricultural enterprises from small farming household systems (Central Document No. 1, 2023).

Agricultural enterprises have characteristic re-

quirements for accounting services affected by their biological nature and cyclical rhythm. In contrast to other enterprises such as manufacturing or commerce, agricultural enterprises have a strong cyclical pattern driven by planting and harvest seasons, which peak in a short time span^[1]. Such a rhythm makes labor allocation a challenge because ensuring a constant labor force is underutilized during the off-season and may face service degradation during peak times when covering average workloads. The challenge not only relates to the volume of work but also to technical complexity such as valuing biological assets, fulfilling government subsidies, and corporate taxes^[2].

The form and nature of peaks in accounting demand also show significant differences across different agricultural sub-sectors in China. Enterprises in grain production located in the North China Plain and Northeast regions exhibit significant peaks in demand during the autumn harvest season from September to November, which includes biological asset measurement at maturity, revenue recognition from the sale of products, and preparation of documentation for national grain subsidies provided by the Ministry of Agriculture and Rural Affairs. These grain production enterprises require significant support during a condensed sixty-to-ninety-day period in which completion of the harvest, government procurement, and annual subsidy applications coincide.

Livestock production shows contrasting seasonal patterns, where continuous biological transformation processes are involved instead of harvesting activities. For swine and poultry production, quarterly biological asset revaluations are needed based on growth cycles, monthly feed cost allocation, and specific accounting treatment for epidemic-related damage in agricultural insurance contracts. There is also exceptional demand during the Spring Festival season in January and February, as annual reporting needs to be completed while simultaneously dealing with high slaughter volumes and complicated revenue recognition for holiday-related premiums.

A third pattern is represented by farmer cooperatives, where accounting complexity is particularly high during the annual general meeting period, which is normally between December and March. During this period,

the cooperatives have to develop member equity statements, determine patronage dividend allocation, and prepare transaction elimination and cooperative tax exemption certification. The coincidence of these cooperative activities and the normal year-end activities creates capacity constraints that the permanent staffing model handles inefficiently.

The windows of application for these subsidies create another cyclical factor, which is independent of biological cycles. The purchase subsidies for agricultural machines, incentive payments for land transfer, and green production certification, among others, have different administrative cycles set by different departments of agriculture in various provinces. Therefore, accounting firms with diversified client portfolios in agriculture will experience peak demands from different cycles, making it essential to have flexible labor capacities so as not to compromise quality while avoiding overcapacity during quiet times. The Rural Revitalization Strategy in China will only increase these demands due to the strategy's aim to promote agricultural industrialization, large family farms, and agricultural cooperatives, which will need sophisticated financial services^[18].

However, specialized accounting practitioners in rural regions remain systemically limited because of talent agglomeration in major cities. Studies have shown consistent talent agglomeration in major cities, with talent leaving rural regions at a rate above 15% per year^[12]. Moreover, talent imbalance in different regions hinders service delivery, especially during peak agricultural seasons when financial statements, tax returns, and subsidies must be submitted. Online platforms or gig economy systems have proved to be a way out of talent geographic separation in different professional service segments^[19]. The platform economy will allow specialists to cater to geographically distant clients without moving to those regions, which may allow improved service delivery in distant regions such as rural regions without hampering service quality because of distinct professional credentials^[20].

2.2. Transaction Cost Economics

Transaction Cost Economics is used to examine relative transaction costs when market contracting is

contrasted with employment, assuming adaptive governance structures to maximize production and transaction cost savings in situations with bounded rationality and opportunistic behavior^[5]. The reduced production costs in gig economy work come from shifting fixed labor expenses into variable expenses, thereby forgoing overhead costs during low demand periods. However, transaction costs bring in offsetting considerations in terms of search costs, bargaining costs, and enforcement costs.

The cost savings incentive corresponds with an economic rationale in which variable labor expenses are more efficient than fixed employment expenses in light of large demand variations over time. Accounting in agriculture is illustrative of this, where a peak in demand relative to a basic level of activity is observed in combinations of year-end closings and tax filings during harvest times. Cost savings are gained by engaging gig talent during peak times without incurring fixed employment expenses. The market for outsourcing globally shows that cost efficiency is a predictor of using contingent talent in establishments with demand fluctuations^[21]. The application of transaction cost economics to agricultural administration outsourcing has precedent in the European context. Vernimmen^[22] empirically examined Belgian farmers' decisions to outsource farm administration using a transaction cost framework, demonstrating that factors such as farmer age, farm size, and institutional environment significantly influenced outsourcing decisions. Their study established that complexity, uncertainty, and time requirements of administrative tasks were key determinants of outsourcing behavior. The present study extends this foundational work to the Chinese agricultural context, focusing specifically on professional accounting service providers rather than farmers as decision-makers, and examining the emerging gig economy platform as the outsourcing mechanism.

H1. *Cost savings will have a positive impact on the intention to hire gig workers among accounting firms working with agricultural businesses.*

Professional service delivery is also characterized by information asymmetry and quality assurance, which are ripe for opportunism and costly to detect^[5]. Professional liability for accounting firms arises regardless of in-house or outsourced service delivery. The agricul-

tural sector is especially vulnerable in terms of accounting compliance for subsidies where an error will attract an audit and a fine. Then labor regulation ambiguity over gig economy workers faces additional accounting service delivery challenges^[23]. Where such regulation uncertainty is not negligible, transaction cost savings will be offset by cost savings in production. Hence,

H2. *The challenge of regulatory compliance is negatively related to the intent to hire gig workers in accounting firms dealing with agricultural businesses.*

2.3. Resource-Based View

The Resource-Based View argues that sustained competitive advantages are obtained from resources that must be considered valuable, rare, non-imitable, and organizationally available^[6]. In a professional service organization, human capital represents the most important strategic resource. The Resource-Based View proposes that firms must organize access mechanism designs in order to gain capabilities that would be impossibly replicable by others through internal or external resources^[24].

Skill access is established as an attractive option when capability demands exceed in-house delivery efficiency. Agricultural accounting requires skillsets not found in most firms: agricultural subsidy accounting, cooperative taxes, and environmental rules of calculation. Building such skillsets will cost too much to justify in firms with insufficient agricultural assets to maintain full-time skillset specialists. Gig work agreements allow firms access to specialists without making a permanent commitment to them, thus increasing their capacity to deliver additional services to agricultural enterprises. The CPA certification is a credibility marker, although reputation systems for working platforms have become a subsequent recognition tool—a wage bonus accrues to CPAs if reputation information is not available but will decrease with gathered reputation information^[20]. Therefore:

H3. *Being able to access skills and expertise is a positive predictor of intent to hire gig economy workers for accounting practices dealing with agricultural companies.*

Strategic reasoning further implies that firms can

improve positioning by focusing on unique capabilities and outsourced functions that can be performed well by others. Professional service firms are increasingly subject to re-engineering because of automation and delegating tasks to allow capacity shifting towards more strategic consulting work^[21]. Core capabilities would primarily be in relationship and quality management, which are functions in which idiosyncratic investments make immobile capabilities. Marginal functions can be outsourced using gig economies to allow permanent employees to focus on higher-order work. This is resource-based thinking with regard to human capital allocation^[25]. Hence:

H4. *Attention to core capabilities is positively related to the hiring intention for gig workers in accounting firms catering to agricultural businesses.*

2.4. Theory of Planned Behavior

The Theory of Planned Behavior explains how attitudes, subjective norms, and perceived control influence intentions in predicting behavior^[7]. The model shows strong predictive validity, accounting for 40–49% of intention and 26–36% of actual behavior variance^[8]. Cross-cultural studies have tested globally for measurement invariance in different national environments, and this supports Chinese application validity^[26].

“Flexibility demand” describes a prominent attitudinal factor, in which agricultural seasonality gives rise to demand variability, which conventional staffing methods can address with costly overcapacity. “Flexibility” remains a core intrinsic attribute of the gig economy because it provides employers with a scalable capacity to keep up with fluctuating demand levels^[27, 28]. Empirical studies on the gig economies in China have proven the significance of flexibility factors in shaping the participation and adoption decisions of both parties in the gig economy market^[19]. Research studies on entrepreneurial intentions have proven that flexibility attitudes can predict participation intentions in work environments^[29].

The translation of flexibility attitudes into actual platform adoption behavior is subject to several psychological dimensions, including those going beyond

the abstract flexibility preferences. Decision-makers of accounting firms considering the adoption of gig platforms will evaluate the theoretical flexibility benefits of the platforms, as well as the perceived familiarity with the systems of digital intermediaries and subjective evaluations of the quality attributes of the platforms. Moreover, Wang and Sun (2025) show that perceived familiarity is a significant and positive influencer of active system usage within technology adoption scenarios, with users having systematic preferences for familiar systems over purely novel systems regardless of objective functionality advantages^[30]. The research implies that experience with digital professional networks, ease of online-based talent matching mechanisms, and quality assurance features of digital systems can affect the pathway from flexibility attitudes to behavioral intentions.

Applied to accounting firm gig worker recruitment, this perspective implies that flexibility demand captures a necessary but potentially insufficient attitudinal precondition. Firms expressing strong flexibility preferences may nonetheless exhibit attenuated hiring intentions if decision-makers lack familiarity with gig platform interfaces or harbor concerns regarding platform reliability and quality control mechanisms. The present study measures flexibility demand as an attitudinal construct while acknowledging that platform familiarity and perceived system quality constitute important boundary conditions meriting examination in subsequent research. Hence:

H5. *Demand for flexibility is positively associated with the intention to hire gig workers among accounting firms dealing with agricultural companies.*

2.5. The Moderating Role of Firm Size

Firm size shapes the translation of economic, capability, and behavioral factors into manpower decisions. In large firms, economies of scale work to increase the thresholds at which using in-house manpower is more economical than external outsourcing. In contrast, small firms have fewer resources, which exaggerate both the strengths and weaknesses: without in-house specialists, small firms gain more capability benefits from

outsourcing access; without peak capacity in summer months, small firms gain more cost savings with flexibility; but without compliance infrastructure, small firms encounter more governance issues. Empirical findings in the gig economy literature include that small firms show strong responsiveness to flexibility and cost factors in adoption decisions, while large firms have an established capability in handling complexity in governance^[19, 23].

The differential responsiveness of small versus large accounting firms to gig economy adoption drivers reflects underlying variations in digital transformation readiness and data-driven decision-making capabilities. The use of gig platforms is essentially a digital transformation process that requires technological infrastructure, organizational support systems, and leadership commitment to technology-mediated service delivery models. Wang et al. (2025) show that small and medium-sized enterprises gain sustainable competitive advantages by using data-driven decision-making with adequate technological competence and organizational digital leadership using an integrated Technology–Organization–Environment and Resource-Based Theory framework^[31]. The results show that SMEs with higher technological competence tend to be more agile in using external digital resources, while those without technological competence face barriers to technology adoption despite perceiving its strategic value.

If we apply these factors to the case of an accounting firm, we can argue that smaller firms may show greater sensitivity to cost and capability factors due to their organizational structures, which are more likely to accommodate digital integration without any bureaucratic barriers, as are commonly found in larger, hierarchically complex organizational structures. Similarly, larger accounting firms may show organizational rigidity that reduces their response to flexibility and skill access incentives, despite their technological advantages. The moderating effect of firm size, therefore, encompasses not only differentials in resource availability but also reflects systematic differences in digital transformation agility and responsiveness to platform-mediated opportunities for professional services.

H6a. Firm size moderates the relationship between cost reduction and hiring intention, such that the positive effect is stronger for smaller firms.

H6b. Firm size moderates the relationship between regulatory compliance challenges and hiring intention, such that the negative effect is weaker for larger firms.

H6c. Firm size moderates the relationship between access to skills and hiring intention, such that the positive effect is stronger for smaller firms.

H6d. Firm size moderates the relationship between focus on core capabilities and hiring intention, such that the positive effect is stronger for smaller firms.

H6e. Firm size moderates the relationship between demand for flexibility and hiring intention, such that the positive effect is stronger for smaller firms.

Figure 1 illustrates the proposed research model integrating these theoretical perspectives and hypothesized relationships.

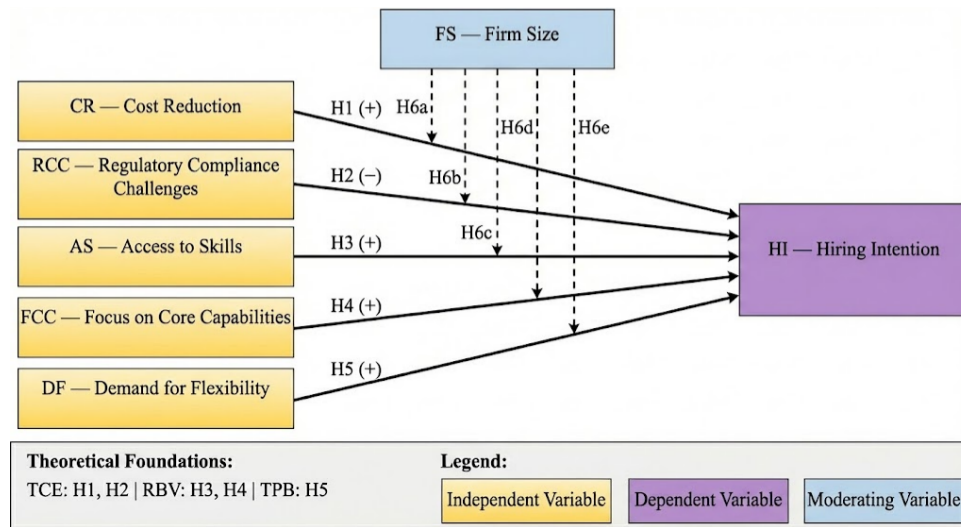


Figure 1. Research Model.

Note: TCE = Transaction Cost Economics; RBV = Resource-Based View; TPB = Theory of Planned Behavior. Solid arrows indicate direct effects (H1–H5); dashed lines indicate moderating effects (H6a–H6e).

3. Methodology

3.1. Research Design

The current research used a cross-sectional survey with a quantitative approach to analyze factors affecting accounting firms' future plans to hire gig employees for providing agricultural enterprise services. The partial least squares structural equation modeling (PLS-SEM) technique was chosen because it is most suitable for complicated models with direct and moderating relationships, especially when a moderate-sized sample is used and focuses on predictive tasks rather than explanation and inference, such as in this research, which aims to predict future behavior^[9, 32]. The proposed model consolidates the Transaction Cost Economics, Resource-Based View, and Theory of Planned Behavior perspectives on future plans toward gig worker recruitment. The indepen-

dent variables are cost savings, skill and expertise acquisition, need for flexibility, core strengths, and regulatory requirements. Firm size is a moderator of all hypotheses.

3.2. Sampling and Data Collection

The population targeted is Chinese accounting firms offering their services to agricultural enterprises, including large firms and small and medium-sized firms. The need to include both large and small and medium firms arises because of the diversified nature of Chinese accounting firms, where large firms are engaged in providing capital market services, with small firms providing a service to local companies such as agricultural cooperatives, family farms, and agribusiness firms. Due to the nature of the research, which mainly focused on agricultural enterprises, the questionnaire also asked about the respondents' experiences in handling agricul-

tural clients. In order to cover all the firms, including the large, small, and medium-sized firms, stratified sampling methods were applied to differentiate these firms according to the number of CPAs, i.e., less than 50 CPAs, 50–200 CPAs, and more than 200 CPAs.

For instance, sample size calculation for analysis using PLS-SEM considered multiple criteria for ensuring sufficient statistical power and stability of parameters. The “ten times” rule, where the number of observations should be at least ten times the maximum number of structural paths leading to each construct, translates into a minimum requirement of 60 observations for the current model^[9]. However, more stringent calculations using the inverse square root method, as suggested by Kock and Hadaya (2018), indicate that for medium effect sizes ($f^2 = 0.15$) and 80% power, with a significance level of 0.05, approximately 85 observations are necessary^[33]. Gamst et al. (2008) recommend a sample of at least 100 for models of moderate complexity with interaction effects^[34]. The obtained sample of 98 respondents meets the ten times rule and the inverse square root method’s requirements while approaching the Gamst standard, thus ensuring a satisfactory statistical base for the analytical objectives.

A total of 107 online questionnaires were distributed via email to firm partners and managers across ten cities in principal agricultural provinces. The survey yielded 98 complete responses representing a response rate of 91.6%. This sample size supports reliable estimation of the hypothesized direct effects and moderation relationships, though acknowledged limitations re-

garding detection of smaller effect sizes and generalizability warrant consideration. Subsequent research employing an expanded sample of approximately 350 valid cases will permit more precise parameter estimation, enhanced statistical power for detecting subtle interaction patterns, and multi-group analyses examining regional and subsector variations. The present analysis establishes foundational evidence regarding relationship directions and approximate magnitudes while recognizing that parameter stability will improve with larger samples in future investigations.

Table 1 shows demographic information of the subjects. Firms were drawn from ten cities in principal agricultural provinces, covering Eastern (42.9%), Central (32.7%), and Western regions (24.5%) in China. Firm size broken down into small firms with less than 50 CPAs accounted for 45.9%, medium firms with 50–200 CPAs accounted for 35.7%, and large firms with over 200 CPAs accounted for 18.4%. A higher percentage of respondents were in senior roles with 38.8% being partners and 61.2% managers. Service experience with agricultural clients is broken down into 28.6% with major agricultural clients (>50% of revenue in agricultural work) and 26.5% with small agricultural clients (<20% of revenue in agricultural work) contrasting with 44.9% with moderate agricultural clients (20–50% of revenue in agricultural work). Types of agricultural clients were mainly farmer cooperatives (76.5%), family farms (68.4%), agricultural enterprises (54.1%), and agribusiness corporations (31.6%) with most firms handling two or more kinds.

Table 1. Sample Demographic Characteristics (n = 98).

Characteristic	Category	n	%
Geographic Region	Eastern China	42	42.9
	Central China	32	32.7
	Western China	24	24.5
Firm Size (by CPA count)	Small (<50)	45	45.9
	Medium (50–200)	35	35.7
	Large (>200)	18	18.4
Respondent Position	Partner	38	38.8
	Manager	60	61.2
Agricultural Client Revenue Share	High (>50%)	28	28.6
	Moderate (20–50%)	44	44.9
	Low (<20%)	26	26.5

Note: Agricultural client types served (multiple responses allowed): Farmer cooperatives (76.5%), Family farms (68.4%), Agricultural enterprises (54.1%), Agribusiness corporations (31.6%).

3.3. Measurement Development

Survey items were developed based on validated scales in past organization studies and outsourcing research with some Chinese agriculture accounting considerations in mind. Responses used five-point Likert scales with strongly disagree and strongly agree options. Cost savings were measured with four items based on transaction cost studies concerning accounting outsourcing research work^[5]. Skill and expertise availability used four items based on resource-based views concerning professional skill acquisition in gig economy settings^[20, 21]. Demand for flexibility used four items concerning attitudes toward worker flexibility and scalability in labor capacity^[27]. Core capabilities emphasized with four items based on strategic decisions to focus on relationship-building activities with outsourcing of routine activities in mind^[25]. Issues in regulatory compliance used four items concerning governance matters and labor regulations in connection with contingent worker participation^[23]. Hiring intentions were measured using four items based on established behavioral intentions studies^[7, 8]; Firm size was objectively measured based on

worker numbers in full-time certified public accountants.

The tool was translated into Chinese using an official translation service. Back-translation methods were used in an attempt to make both versions semantically equivalent. A total of six accounting and agricultural economics domain experts reviewed items for clarity, redundancy, and possible double-barreling. Redundant items were removed, unclear language clarified, and a double-barreled item was separated into two distinct items based on comments from domain experts. Final confirmation of these versions before administration in the field was obtained from a total of six domain experts.

3.4. Pilot Study Results

To establish internal consistency, Cronbach's alpha statistics were used. The scale exceeded 0.80 for all dimensions, which indicated a high level of reliability. The corrected item to total correlation of all the items was greater than 0.40, which ensured a good level of reliability of individual items, and hence all the items were found to be suitable for analysis. The results can be found in **Table 2**.

Table 2. Reliability Test Results.

Construct	Cronbach's α	Items	CITC Range
Focus on Core Capabilities (FCC)	0.873	4	>0.4
Access to Skills (AS)	0.849	4	>0.4
Cost Reduction (CR)	0.880	4	>0.4
Demand for Flexibility (DF)	0.861	4	>0.4
Regulatory Compliance Challenges (RCC)	0.858	4	>0.4
Firm Size (FS)	0.909	5	>0.4
Hiring Intention (HI)	0.819	4	>0.4

To establish the construct validity, exploratory factor analysis was done. The Kaiser-Meyer-Olkin index of sampling adequacy was 0.804, which is higher than the required 0.70. This ensured that the correlation matrix was adequate for factor analysis. Additionally, Bartlett's Test of Sphericity was statistically significant with a result of $\chi^2 = 1,923.905$, $df = 406$, and $p < 0.001$. This ensured that there were sufficient correlations between the variables to carry out factor analysis. Through Principal Component Analysis with Varimax rotation, seven dimensions with eigenvalues above one were obtained, which accounted for 68.8% of the total variance. Additionally, all factor loadings stood above 0.50 with neither

cross-loaded nor problematic items.

The measurement model was assessed in Smart-PLS in accordance with existing guidelines for assessing variance-based structural equation modeling research^[10, 35]. Indicator reliability was established with all outer loadings above 0.50, in addition to statistical significance. Internal consistency was further demonstrated with composite reliability above 0.80 for all indicators. Convergent validity demonstrated average variance extracted above 0.50 for all latent variables. Discriminant validity testing used two methods, which were complemented in assessing Fornell-Larcker criteria such that the square root of AVE comparisons were above all inter-construct corre-

lations, with HTMT ratios below the recommended threshold of 0.85. Overall model fit used SRMR criteria, which stood at 0.058 in this research, below the recommended threshold of 0.08 for variance-based SRMR models.

Given that both predictor and criterion variables were collected from identical respondents within a single survey administration, Common Method Bias represents a potential threat to construct validity requiring explicit assessment. Two diagnostic procedures were employed to assess the severity of the CMB. The Single Factor Test of Harman, which subjected all the items used for the measurements to an unrotated factor analysis, revealed only 28.4% of the total variance for the first factor, which is far from the 50% threshold for problematic common method variance. The Full Collinearity VIF approach, as proposed by Kock (2015), is a more inclusive approach for evaluating the CMB, as it considers the variance inflation factors for all latent variables when regressed against a common factor^[36]. All full collinearity VIF values ranged from 1.18 to 2.47, and they were below the conservative threshold of 3.3, suggesting that common method bias does not pose a serious threat to the validity of structural relationships.

3.5. Analytical Approach

Partial least squares structural equation modeling was carried out using SmartPLS software. The two-step approach suggested in the literature on the guidelines for conducting research methodology was adopted for the current study^[9,32]. The two steps include testing the measurement model and assessing the reliability of the indicators through the outer loading, internal consistency using Cronbach's alpha and composite reliability, average variance extracted for convergent validity, and Fornell-Lacker criteria and heterotrait-monotrait ratio

indices for discriminant validity.

The second stage involved assessing the results of the proposed model structurally. To check multicollinearity, variance inflation factors were used with a cut-off threshold of 5.0. Path analysis and significance tests were conducted using bootstrapping methods with 5,000 resamplings to estimate standard errors and construct confidence intervals. Explanatory fit of the model was evaluated by assessing the R^2 values of endogenous latent variables. Predictive validity of the model was tested for predictive relevance using Stone and Geisser's Q^2 statistics derived from blindfolding methods. Additionally, the substantive significance of individual path relationships was measured using Cohen's f^2 statistics.

To examine the hypothesis of moderation, a product indicators approach was used. The predictor variables were all mean-centered before generating interaction terms using the product of mean-centered predictor variables and the indicator of firm size. The interaction terms were then used in the structural model to see if firm size had a moderating effect on relationships among other independent variables and hiring intention.

4. Results

4.1. Measurement Model Assessment

Cronbach's alpha and composite reliability were used to estimate construct reliability. As presented in **Table 3**, all constructs surpassed the threshold of 0.70 for both statistics, with Cronbach's alpha ranging from 0.82 to 0.91 and composite reliability ranging from 0.88 to 0.94. To estimate convergent validity, average variance extracted was used, where all constructs surpassed a threshold of 0.50, indicating each construct explained more than half the variance in the indicators.

Table 3. Reliability and Convergent Validity.

Construct	Cronbach's α	CR	AVE	Convergent Validity
CR	0.880	0.880	0.596	Yes
RCC	0.858	0.861	0.554	Yes
AS	0.849	0.852	0.534	Yes
FCC	0.873	0.876	0.640	Yes
DF	0.861	0.861	0.555	Yes
FS	0.909	0.910	0.670	Yes
HI	0.819	0.818	0.518	Yes

Note: CR = Composite Reliability; AVE = Average Variance Extracted. Thresholds: Cronbach's $\alpha > 0.70$; CR > 0.70 ; AVE > 0.50 .

Discriminant validity was tested using the Fornell and Larcker criterion. **Table 4** below shows the results where the square root of AVE is higher than all other correlations in each row and column. Further, all HTMT ratios were below 0.85, thus satisfying the conservative threshold guideline recommended by Franke and Sarstedt in 2019 to assist in validating discriminant validity.

4.2. Structural Model Assessment

Before embarking on hypothesis testing, collinearity among predictor variables/constructs was evaluated using variance inflation factors (VIF). As presented in **Table 5**, all of the VIF statistics were below 3.0. Hence, multicollinearity is not considered a threat to model parameter estimate validity in this study, as recommended by Hair in 2022^[9].

The structural model indicated a good fit with an

SRMR of 0.058, which is below 0.08, a requirement for variance-based SEM analysis^[32]. **Table 6** shows the model's explanatory and predictive fit. The model indicated a very good explanatory fit with an R^2 of 0.610 for hire intention, which shows that the independent variables, including their interaction with firm size, can explain 61% of the variance in accounting firms' hire intention for gig workers. The model's explanatory fit can be considered robust with an adjusted R^2 of 0.587 since it takes into consideration model complexity. Predictive fit is established using the Stone-Geisser Q^2 with a value of 0.298 obtained using blindfolding tests, which is above zero and shows medium predictive fit^[9, 35].

Path coefficients and their statistical significance were estimated using bootstrapping with 5,000 resamples. **Table 7** presents the complete structural model results including path coefficients, t-values, p-values, 95% confidence intervals, and effect sizes (f^2).

Table 4. Discriminant Validity (Fornell-Larcker Criterion).

Construct	CR	RCC	AS	FCC	DF	FS	HI
CR	0.772						
RCC	0.351	0.744					
AS	0.288	0.231	0.730				
FCC	0.275	0.419	0.452	0.800			
DF	0.336	0.136	0.257	0.430	0.745		
FS	0.268	0.152	0.226	0.412	0.184	0.819	
HI	0.251	0.450	0.451	0.478	0.245	0.344	0.720

Note: Bold diagonal values represent square roots of AVE; off-diagonal values represent inter-construct correlations.

Table 5. Collinearity Assessment (VIF).

Predictor	VIF
Cost Reduction (CR)	1.284
Regulatory Compliance Challenges (RCC)	1.356
Access to Skills (AS)	1.412
Focus on Core Capabilities (FCC)	1.625
Demand for Flexibility (DF)	1.318
Firm Size (FS)	1.247

Note: VIF < 3.0 indicates no collinearity issues^[9].

Table 6. Model Explanatory and Predictive Power.

Endogenous Variable	R^2	R^2 Adjusted	Q^2	Predictive Relevance
Hiring Intention (HI)	0.610	0.587	0.298	Medium

Note: R^2 interpretation: 0.25 (weak), 0.50 (moderate), 0.75 (substantial). $Q^2 > 0$ indicates predictive relevance; $Q^2 > 0.25$ indicates medium predictive relevance.

Table 7. Structural Model Results and Hypothesis Testing.

Direct Effects	Path	β	t-Value	p-Value	95% CI	f^2	Effect Size	Supported
H1	CR → HI	0.221	4.215	<0.001	[0.118, 0.324]	0.062	Small	Yes
H2	RCC → HI	-0.182	3.019	0.002	[-0.300, -0.064]	0.044	Small	Yes

Table 7. Cont.

Direct Effects	Path	β	t-Value	p-Value	95% CI	f ²	Effect Size	Supported
H3	AS $\rightarrow$ HI	0.198	3.642	<0.001	[0.091, 0.305]	0.051	Small	Yes
H4	FCC $\rightarrow$ HI	0.246	4.587	<0.001	[0.141, 0.351]	0.078	Small	Yes
H5	DF $\rightarrow$ HI	0.167	2.945	0.003	[0.056, 0.278]	0.038	Small	Yes
Moderating Effects	Path	β	t-Value	p-Value	95% CI	f ²	Effect Size	Supported
H6a	FS $\times$ CR $\rightarrow$ HI	-0.144	2.891	0.004	[-0.242, -0.046]	0.028	Small	Yes
H6b	FS $\times$ RCC $\rightarrow$ HI	0.139	2.563	0.011	[0.032, 0.246]	0.025	Small	Yes
H6c	FS $\times$ AS $\rightarrow$ HI	-0.128	2.745	0.006	[-0.220, -0.036]	0.022	Small	Yes
H6d	FS $\times$ FCC $\rightarrow$ HI	-0.112	2.126	0.034	[-0.215, -0.009]	0.018	Small	Yes
H6e	FS $\times$ DF $\rightarrow$ HI	-0.095	2.034	0.042	[-0.187, -0.003]	0.014	Small	Yes

Note: Bootstrap samples = 5,000. f² effect size interpretation: 0.02 (small), 0.15 (medium), 0.35 (large). CI = Confidence Interval.

All five hypotheses related to direct effects were confirmed by the empirical analysis. Emphasis on core capabilities showed a strong positive impact on the intention to hire ($\beta = 0.246$, $p < 0.001$, $f^2 = 0.078$) in support of Hypothesis 4, which shows that accounting firms targeting a focus on core capabilities in relationship-driven consulting work and outsourcing routine work show a strong willingness to hire gig economy workers for agricultural clients. Cost savings had a positive impact on the intention to hire ($\beta = 0.221$, $p < 0.001$, $f^2 = 0.062$) in support of Hypothesis 1, which proposes that accounting firms estimating higher cost savings from gig economy work show strong adoption intentions. Availability of skills and expertise had a positive impact on the intention to hire ($\beta = 0.198$, $p < 0.001$, $f^2 = 0.051$) in support of Hypothesis 3. Demand for flexibility had a positive influence on hiring intentions ($\beta = 0.167$, $p = 0.003$, $f^2 = 0.038$) in support of Hypothesis 5. Obstacles in complying with regulations had a negative impact on hiring intentions ($\beta = -0.182$, $p = 0.002$, $f^2 = 0.044$) in support of Hypothesis 2.

The five hypotheses on moderation were all supported empirically. Firm size had a negative moderation effect on the negative relationship between cost reduction and hiring intentions ($\beta = -0.144$, $p = 0.004$), which supports Hypothesis 6a and shows that smaller firms have a stronger positive association with cost reduction motivation. Firm size had a positive moderation effect on the negative relationship between regulatory compliance difficulties and hiring intentions ($\beta = 0.139$, $p = 0.011$), which supports Hypothesis 6b and shows that larger companies are less affected by considerations of regulatory compliance. The negative moderation effects of firm size on access to skills ($\beta = -0.128$, $p = 0.006$),

focus on core competencies ($\beta = -0.112$, $p = 0.034$), and demand for flexibility ($\beta = -0.095$, $p = 0.042$) were all significant and support Hypotheses 6c, 6d, and 6e, respectively. Figure 2 shows these moderation effects graphically.

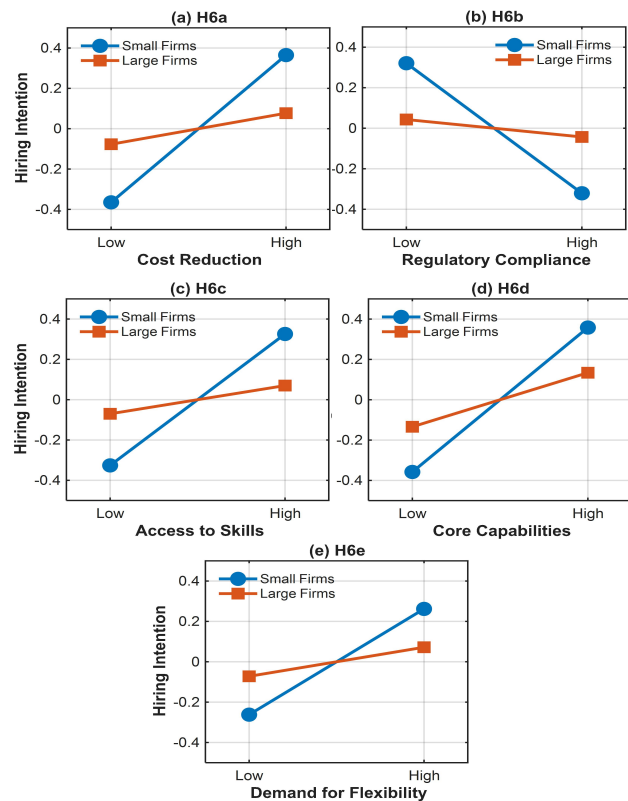


Figure 2. Moderating Effects of Firm Size: (a)–(e) correspond to H6a–H6e respectively.

Note: Simple slopes are plotted at ± 1 SD from the mean of firm size.

5. Discussion

5.1. Summary of Findings

The present study focused on identifying factors that affect Chinese accounting firms' intent to employ gig

economy workers for agricultural business service delivery, thus playing a part in filling the literature on how platform-mediated professional services can fill service delivery inaccessibility in rural settings. The findings from this study empirically support a comprehensive conceptual framework where all hypothesized relationships are tested for significance, with positive relationships being evident. The positive impact of cost savings on hiring intent in this study is consistent with Transaction Cost Economics^[5]; this is especially evident in agricultural accounting where cost differentials in maintaining permanent staff all year round compared to using gig economy professionals during peak hours are immense.

Skill and expertise sharing proved to be another major factor, in support of Resource Based View principles^[6, 20], since agricultural accounting is a specialized service in which common practice firms do not possess such skill sets in subsidy accounting, cooperative taxes, or biological asset valuations, and gig agreements facilitate skill sharing for participating firms to tap into expertise without creating a permanent headcount. It bears immense significance in developing agricultural socialized service systems because such a model exemplifies a feasible way to provide such specialized skill sets to newly formed agricultural business enterprises, which do not have access to specialists.

The positive impact of demand for flexibility on hiring intentions validates that attitudinal considerations supplement an economic calculation in making workforce decisions^[7, 8], and agricultural support services represent an important case where flexibility turns out to be operationally critical with periodic crop harvest times and end-of-year closings resulting in peak workloads that standard permanent employment can address only by being underutilized and overstaffed. Emphasis on core strengths remains a factor in gig recruitment, thus underpinning a theoretical premise that companies improve competitive advantage by focusing on core strengths and pushing non-core functions into the external environment^[21, 25]. Regulatory compliance issues that are pressing created a negative impact on hiring intentions and thus validated the theoretical premise that governance issues limit gig economy growth. The regulatory compliance construct in the current study reflects a

dual-dimensional concern that includes labor law compliance and professional quality assurance dimensions. The items that measure regulatory compliance include ambiguity in classifying employees, professional liabilities, quality control, and audit risk.

The qualitative feedback from pilot study respondents also showed that labor law compliance issues revolved around risks of worker misclassification due to the evolving Chinese labor regulations, where platform-mediated professional engagements were situated between independent contracting and employment. There has been apprehension from accounting firms about the possible retroactive classification of gig workers as employees, which could lead to social insurance contribution liabilities and penalties. The guidelines issued in 2024 by the Ministry of Human Resources and Social Security regarding the protection of platform workers have increased the uncertainty surrounding the classification of workers in professional services.

Professional quality assurance concerns operate through different mechanisms that are related to accounting standard compliance. Agricultural accounting engagements that require documentation of government subsidy claims are under increased scrutiny by agricultural bureaus and audit authorities, whereby errors in subsidy documentation attract investigations that can lead to debarment. The respondents' concerns focused on issues of quality control of gig workers' outputs, professional liability in cases where poor work products are produced by outside specialists, and reputation when the services provided through gig work are not satisfactory.

The negative sign for regulatory compliance challenges captures the combined deterrent effect of these two dual concerns, implying that policy interventions should target both employment status clarification through labor law reform and professional liability through accounting regulatory bodies. For larger firms, lower sensitivity to these types of compliance concerns is likely driven by the presence of established legal departments to address complexities surrounding employment classification issues and quality assurance infrastructure to support intensive evaluation of externally sourced work products before client delivery.

Another important aspect of the findings was the role of the moderating variable of the size of the firms, which introduced boundary conditions with important implications for the development of agricultural service systems. The small firms showed increased sensitivity to cost minimization, skill availability, flexibility necessity, and core competency emphasis, while the large firms showed reduced sensitivity to compliance issues arising from governance structures.

The pattern of moderation for regulatory compliance challenges deserves further elaboration, especially in terms of policy relevance. **Figure 2b** shows that the slope for small firms is quite steep and negative, implying that concerns over regulatory compliance have a major impact on hiring intentions of resource-constrained practices. The large firms show a flat line, indicating relative insensitivity to regulatory compliance considerations in deciding on gig worker adoption. This difference in response is due to structural advantages that large accounting firms have.

Generally speaking, large companies have legal and human resource teams that specialize in employment law compliance and can structure complex contracts to limit the risk of worker misclassification. Large companies also have established relationships with labor law counsel to quickly seek guidance in situations where ambiguity in the law exists. The quality assurance infrastructures in big companies include formalized review hierarchies, work paper templates, and supervision systems that allow for the thorough screening of work products received from outside sources before delivery to clients, hence managing professional liability risk irrespective of the sources of work products.

Larger firms also exhibit a stronger risk absorption capacity, whereby potential regulatory sanctions or professional liability claims are perceived as manageable contingencies rather than threats to the very existence of the firm. This financial cushion allows the decision-makers of large firms to consider the adoption of the gig model based on the potential benefits of the strategy and the cost of compliance as operational expenses. This is because small businesses would not have such legal frameworks, quality assurance systems, and financial reserves. Therefore, they would place more emphasis on

regulatory compliance risks, leading to the strong negative relationship that has been found between regulatory compliance concerns and hiring intentions. This means that small accounting firms that serve the agricultural sector would benefit the most from the implementation of gig economy services.

5.2. Implications for Agricultural Socialized Service System Development

The results have important implications for agricultural socialized service systems in line with Rural Revitalization policies. The gig economy solutions remove the location mismatch problem in which talent in cities is not in line with service demand in agriculture, allowing specialists to reach scattered agricultural clients without moving to their location. Skill access promotes new agricultural business organizations to gain access to specialized talent in subsidy regulation and co-operative taxes not available before, with flexibility advantages in matching capacity with agricultural cycles rather than operating with perpetual excess capacity.

Such supply-side results have demand-side implications. Availability of expert financial service is associated with better credit accessibility and subsidy use for agricultural enterprises—formal credit enhances the scale efficiency of family farms by 8% and mediates more than one-third of the impact on large-scale farming behavior. The gig economy mechanism therefore not only symbolizes labor optimization for accounting firms but is a means for improving financial management capacity in the agricultural industry.

5.3. Theoretical Contributions

Several theoretical contributions have been made in this research work, given that it integrates the perspectives of Transaction Cost Economics, Resource-Based View, and Theory of Planned Behavior in a way that these perspectives have not previously been applied in decisions concerning the professional service workforce in agricultural settings. Moreover, the finding concerning boundary conditions confirms the significance of organizational size in influencing both intensity and nature of relationships between strategic in-

fluencers and recruitment plans. Additionally, in applying research concerning gig economy studies in literature concerning socialized service systems in agriculture, this research work demonstrates a connection between organizational behavior and agricultural economics studies in relation to overcoming difficulties in agricultural professional service delivery through platform economy principles.

5.4. Practical Implications

Accounting firms will have different implications based on scale. Small and medium-sized firms can make use of gig labor to cope with varying demand and hire specialized agricultural accounting expertise, which will widen capacity to cover new agricultural business enterprises. Large firms can focus on developing expertise in specialized agricultural sectors rather than focusing on cost-cutting. New agricultural business firms can benefit from specialized expertise available via online platforms, which at present is available to enterprises located in urban areas or with access to higher service charges.

The empirical findings reveal that regulatory compliance challenges exert a negative effect on hiring intention ($\beta = -0.182$), with small firms exhibiting particularly steep negative slopes in the moderation analysis. This pattern indicates that addressing regulatory barriers would yield disproportionate adoption gains among smaller practices serving agricultural clients. Three operationally specific recommendations emerge from the data patterns.

The negative moderation effect of regulatory compliance, as measured by $\beta = 0.139$ for the interaction of firm size, implies that small firms place much more weight on employment classification risks compared to large firms. Small firm partners, as evidenced by pilot test qualitative feedback, cited the uncertainty of social insurance contribution obligations and back payment penalties as deterrents. The current "Platform Economy Employment Guidance" covers delivery and transportation workers but does not include professional service situations. An interpretive addition, stating licensed CPAs working through platforms for project-based engagements satisfying three conditions—control

over methods, simultaneous engagement with multiple clients, and maintenance of independent professional liability coverage—would qualify them as independent contractors, not employees. This clarification does not require any new legislation but rather an administrative interpretation of existing categories and may be issued in the form of pilot guidance in agricultural provinces such as Henan, Shandong, and Heilongjiang, where the service accessibility gap is most acute.

The skill access driver had a significant effect ($\beta = 0.198$), and the stronger effect for smaller firms (interaction $\beta = -0.128$) implies that lowering search costs for qualified agricultural accounting specialists would aid adoption. There is currently no way for platform operators to verify domain-specific expertise beyond general CPA credentials. Continuing professional education tracking systems maintained by the Chinese Institute of Certified Public Accountants can be extended to include agricultural accounting competency modules. Practitioners who undertake the required coursework in biological asset measurement under CAS No.5, cooperative taxation under State Administration of Taxation, and agricultural subsidy documentation requirements can be given a searchable designation that is visible to the platform's users. This makes use of the existing infrastructure of the CICPA (The Chinese Institute of Certified Public Accountants) administration systems instead of creating another certification infrastructure, with costs restricted to curriculum development and database modifications. Platform operators like Zhubajie and accounting networks can use API connections to access CICPA databases, which can help reduce search costs that small firms identified as a barrier in finding qualified gig specialists.

The cost reduction driver shows the strongest differential effect among all firm size categories (interaction $\beta = -0.144$), and cost factors clearly drive small firm calculus for platform adoption. The 10–20% transaction fees on the platform represent a high cost burden to small firms operating on thin margins to serve price-sensitive agricultural clients. Currently, the agricultural department of each province, which manages the funds for Rural Revitalization, uses these funds to support the development of agricultural socialized service systems. In 2024, the funds transferred by the cen-

tral government to support agricultural production service activities exceeded 40 billion RMB. There is no need to make any additional appropriations to allow these funds to cover the fees of professional accounting service platforms for registered family farms and farmer cooperatives. A fee subsidy rate of 50% for qualified engagements, with a ceiling of 5,000 RMB per year per accounting firm, will lower effective costs on the platform to comparable levels with traditional referral platforms. The existing "Agricultural Socialized Service Subsidy Pilot" in Shandong Province offers an administrative framework for implementation. Eligibility is verified through cross-referencing platform transaction records against the Ministry of Agriculture family farm and cooperative registration records.

This follows directly from the observed effect sizes and moderation patterns, not from policy aspirations. The focus on existing administrative infrastructure for program implementation, such as continuing education systems operated by CICPA, human resource bureaus at the provincial level, and funding allocation for Rural Revitalization, keeps administrative costs low while directly targeting the problem areas identified through empirical analysis.

5.5. Gig Labor and Generative AI: Competing or Complementary Strategies

The present analysis is centered on human gig workers as a solution for the problem of resource constraints in agricultural accounting services. The current advancements in Generative Artificial Intelligence need to take into account the impact of AI-based automation and the competition from human gig workers.

The applications of generative AI in executing structured accounting processes such as data entry, data classification, financial statement preparation, and report writing are also becoming more capable. These processes significantly overlap with lower-complexity processes that an accounting firm might consider outsourcing to gig workers, and there is the possibility of substitution as AI adoption contributes to lower demand for human platform workers in these categories. Wang and Zhang (2025), in their study on the usage of Generative AI in the service sector, have shown that when

an AI strategy is implemented, it leads to increased creativity and performance by employees when conditions for human-AI collaboration are favorable^[37]. This study shows that AI augmentation is effective when it is used as a support for human judgment, but not a replacement for it, especially for non-routine tasks.

With regard to agricultural accounting, it appears that there is scope for a complementary relationship between gig labor and Generative AI, with AI systems used for data processing and human specialists used for judgment-based activities. Biological asset valuation, which requires the assessment of crop condition, subsidy documentation, which requires the interpretation of regulations, and cooperative governance, which requires negotiations with stakeholders, are areas where human specialists have a comparative advantage over AI systems. Gig workers who have specific knowledge about agricultural accounting might emerge as AI supervisors and validators of output rather than task performers, and the platform model would allow for the utilization of human judgment capability.

The "Access to Skills" driver under consideration in the current specific study could thus evolve from the ability to access human task execution skills to the ability to access specialized judgment and AI oversight skills. Accounting firms using a combined approach of AI automation for routine processing and gig-mediated access to human judgment for complex agricultural issues could thus improve service delivery outcomes. Future research should examine how Generative AI adoption moderates the relationships identified in the present study, particularly whether AI capability development attenuates or transforms the skill access motivation for gig worker recruitment.

5.6. Limitations and Future Research

Several limitations warrant acknowledgment alongside directions for future inquiry. The cross-sectional research design precludes causal inference, permitting identification of associational patterns without establishing temporal precedence or ruling out reverse causality. Longitudinal research tracking accounting firm gig adoption decisions over multiple agricultural cycles would strengthen causal claims and illumi-

nate dynamic relationships between antecedent factors and hiring behavior as platform markets mature and regulatory environments evolve.

The sample of 98 respondents, while satisfying minimum thresholds for PLS-SEM analysis as demonstrated through the inverse square root method and Gamst criteria assessment, limits statistical power for detecting smaller effect sizes and restricts the capacity for subgroup analyses examining regional or subsector variations. Subsequent research employing expanded samples of approximately 350 cases will permit more precise parameter estimation, multi-group comparisons across firm size categories and agricultural client types, and examination of additional moderating variables including platform familiarity and digital leadership characteristics.

Generalizability constraints arise from the exclusive focus on Chinese accounting firms operating within specific institutional, regulatory, and cultural contexts. Cross-national comparative studies that analyze the pattern of adoption of gig workers in agricultural accounting practices will help to understand the boundary conditions and the universally applicable or culturally specific nature of the relationship pattern.

This analysis includes the supply-side evaluations of accounting firm decision-makers but not demand-side evaluations of agricultural enterprise clients who receive the services provided through the gig economy. Additional research to measure client satisfaction, perceived quality, and willingness to pay for accounting services provided through the gig economy would offer a more balanced evaluation of the contributions to the development of the agricultural socialized service system.

The future research should also consider other contingency factors like organizational culture orientation to innovation and risk-taking, platform maturity and reputation in regional markets, digital transformation readiness including technology and leadership support, and levels of agricultural development impacting client sophistication and service demands. Investigation of how Generative AI adoption interacts with gig labor strategies, potentially moderating skill access motivations or creating complementary human-AI workflow configurations, represents a particularly timely research direction given rapid AI capability development in professional

service domains.

The platform familiarity and system quality factors identified through integration of Wang and Sun (2025) merit direct empirical examination as potential mediators or moderators of the flexibility demand-hiring intention relationship^[30]. Research incorporating these psychological adoption factors would enhance understanding of the behavioral pathway from attitudinal flexibility preferences to actual platform engagement decisions among accounting firm decision-makers.

6. Conclusions

The presented research aims to identify factors influencing accounting firms in China in terms of a gig worker recruitment intention for agricultural enterprise services. PLS-SEM results with 98 samples validated a positive influence of cost-cutting, skill access, flexibility requirements, and core capabilities on hiring intentions but a negative impact of regulation requirements. Firm size acts as a moderating factor where smaller firms are more influenced by cost-capability considerations and larger firms can cope better with regulative considerations.

The results have implications for research on socialized service systems in agriculture by illustrating the role of platform-based systems in increasing professional service reach to new agricultural enterprises. The causal chain from gig system adoption to increased rural reach to better financial management to improved credit access and subsidies to agricultural modernization puts the role of accounting firm employment decisions in a critical role in achieving Rural Revitalization goals. The role of uncertainty in regulations pertaining to contracts, responsibility, and status remains a critical impediment to adoption when strategic. Future studies can benefit from an increased sample size, a longitudinal approach, and investigating views of agricultural enterprises on gig service delivery to complement this supply-side analysis.

Author Contributions

Conceptualization, Z.C. and S.A.; methodology, Z.C., S.A. and M.H.; software, Z.C.; validation, Z.C., S.A. and

M.H.; formal analysis, Z.C.; investigation, Z.C.; resources, S.A. and M.H.; data curation, Z.C.; writing—original draft preparation, Z.C.; writing—review and editing, S.A. and M.H.; visualization, Z.C.; supervision, S.A. and M.H.; project administration, S.A. All authors have read and agreed to the published version of the manuscript.

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Institutional Review Board Statement

The study was conducted in accordance with the Declaration of Helsinki, and approved by the Institutional Review Board (Ethics Committee) of Universiti Utara Malaysia (protocol code UUM/COB/REC/2024/012 and date of approval 15 March 2024).

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

Data Availability Statement

The data supporting the findings of this study are not publicly available due to privacy considerations for the participating accounting firm partners and managers. The survey collected information regarding firm size, agricultural client portfolios, and strategic workforce decisions from 98 respondents across ten cities in China, which could potentially identify participating firms or individuals given the limited sample size and specific industry context. The survey instrument and anonymized summary statistics are available from the corresponding author upon reasonable request.

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Conflicts of Interest

The authors declare no conflict of interest.

AI Use Statement

The authors utilized ChatGPT-4 solely for the purpose of grammar checking, sentence structure refinement, and enhancing the readability of the English text in this manuscript. The authors take full responsibility for the entire academic content, including all ideas, data, analysis, and conclusions presented herein. The use of AI was thoroughly reviewed and supervised by the authors.

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