



Online labor service crowdsourcing analysis based on linear discriminant regression

Han Xiao*, Gong Xiaomin, Zhang Pengzhu

Antai College of Economics & Management, Shanghai JiaoTong University, Shanghai 200030, China

Received 2 June 2018; received in revised form 1 July 2018; accepted 3 July 2018

Available online 10 July 2018

Abstract

In order to enhance the effectiveness of the research on the new-type business management of online labour service crowdsourcing effect based on sharing economy, this paper proposes an online labour service crowdsourcing effect analysis method based on linear discriminant regression. Firstly, it relies on knowledge service and business combination to promote the selection coordination of public users and crowdsourcing website in sharing value-driving and spacial technology, wherein, the value chain of crowdsourcing is the value network composed of infrastructure and operation process, it promotes the communication technology product or technical service through the product flow, service flow, information flow and capital flow of value network and establishes the research model; secondly, based on linear discriminant regression, it measures and tests the relationship between online labour service crowdsourcing effect and single class by aid of the nearest subspace classifier, based on the relationship between test effect and training effect obtained from the farthest subspace classifier, finally, it verifies the effectiveness of the algorithm through simulated experiment.

© 2018 Elsevier B.V. All rights reserved.

Keywords: Shared economy; Online labour; Crowdsourcing; Business management

1. Introduction

In the era of the public participating in economic activities jointly, new participation and coordination form is changing the commodity and service invention, production, sales and distribution modes (Chen, 2016; Jing-Feng, Liang, & University, 2016; Sukaini, Zhang, & Albazooni, 2016; Zhang and Zhang, 2011). The organizational entity has weakened relatively, the open source and coordination has become the new labor form, wherein, the openness of network structure is the fundamental of this advantage, and the network information technology has realized the synchronization between knowledge and personnel. The professor Ramaswamy from University of

Michigan and the founder Gouillart of “Group Creation and Cooperation Experience” point out that customer experience is the core of business organizations in value creation, “public creation” is a new value creation mode, which is a coordinated self-organized dynamic mechanism formed through the communication and coordination of customers, employees and stakeholders (Aloisi, 2015; Hao, Hou, & Zheng, 2016; Hester, Shaw, & Biewald, 2010; Liu et al., 2010; Shi, 2017; Turi, Domingo-Ferrer, & Sánchez, 2017).

The raiser of crowdsourcing and the journalist of American Wired, thinks network community is the third kind of organization between market and enterprise, which is composed of the diversified appreciation layer of individuals and shared layer of platform resources. The network promotes the socialized production...In the more and more democratic business trend, network crowdsourcing

* Corresponding author.

E-mail address: hhxiaoxiaohh21@163.com (X. Han).

has become one representation of democracy innovation. Network crowdsourcing develops under three era backgrounds: (1) The appearance of semi-profession and semi-amateur website users; (2) The popularity of internet and participation of consumers; (3) The network community organizes the participants together and form the production unit. The emergence of crowdsourcing reveals that the network community can effectively organize the worker, the professor Eric Hippel from Massachusetts Institute of Technology writes in *Democracy Innovation* that the framework of network community provides many advantageous situations for innovators, wherein, the semi-profession and semi-amateur amateurs are the engine to start the network crowdsourcing mode (Ashokkumar, Arunkumar, & Don, 2018; Hussein et al.; Sarvaghad-Moghaddam et al., 2018; Wei, Meng, & Arunkumar, 2018).

In view of practice, the emergence of network crowdsourcing has formed new production mode, new factor organization form and new labour organization. Compared with the organizational forms such as bureaucracy organization and market in new economics, network crowdsourcing is more similar to the intermediary in the mutual penetration and influence of enterprise and market, its relative advantage is that it is more stable than market and more flexible than bureaucracy organization, which is a kind of intermediate organization system featured with moderate assets specificity, competitive and cooperative, and relying on the market relationship, trust and promise for coordination. The first crowdsourcing network in domestic was founded in 2005, up to 2012, there had been over hundreds with different scales, realizing one billion Yuan of turnover, and tens of millions of crowdsourcing practitioners with an increasing proportion of monthly 30%, which is called as the ideal practice mode for the industrial organizations such as marketing, advertising and industrial design, and is widely applied in multiple fields including law, management consulting, agriculture, scientific research, sports, medical treatment and recruitment, and the industry relying on public wisdom to create knowledge has wide prospect, which makes democracy innovation gradually replace the traditional innovation mode of bureaucracy organization from top to bottom (Elhoseny et al., 2018; Tharwat, Elhoseny, Hassanien, Gabel, & Arunkumar, 2018; Vardhana, Arunkumar, Abdulhay, & Ramirez-Gonzalez, 2018).

This paper aims at explaining the coordinated innovation mode of network crowdsourcing, discussing the method of individuals and enterprises participating in coordination innovation based on the network crowdsourcing mode, and providing theoretical and practical reference for multiple internet innovation modes based on network crowdsourcing. This paper lays emphasis on researching the coordination organization mode of network crowdsourcing as well as the method for weigh openness and innovation quality of platform service system, discusses how to guarantee the innovation effect and reduce the transaction cost thus to present the feasible public innovation effectively

through diversified participation mode and value coordination of individuals and organizations in the practical process of network crowdsourcing platform (Abdulhay, Elamaran, Arunkumar, & Venkatraman, 2018).

2. Model description

Crowdsourcing mode remoulds the network microcosmic value ecology. Firstly, rely on knowledge service and business combination to promote the selection coordination of public users and crowdsourcing website in sharing value-driving and spacial technology, its potential objective is to create value and benefit perception for customers, shareholders and society. Secondly, the value chain of crowdsourcing is the value network composed of infrastructure and operation process, it promotes the communication technology product or technical service through the product flow, service flow, information flow and capital flow of value network. Finally, the network crowdsourcing screens the micro-innovation and micro-contents submitted by the massive users through public filtering, wherein, the evaluation and voting on innovative products has become the important “digital capital”, which is a cooperative filtering and transmission mode by aid of public wisdom. Based on the literature analysis and empirical survey and summary, this paper puts forward the following assumptions on the coordination and innovation process of network crowdsourcing.

Hypothesis (H1). The network crowdsourcing resource coordination has positive correlation with the platform coordination effect. Wherein, the micro-innovation transaction, customer information utilization and individual potential exploration in the resource coordination dimension have positive influence on the coordination effect.

Hypothesis (H2). The network crowdsourcing operation coordination has positive correlation with the platform coordination effect. Wherein, the network business channel, cloud-side AppCloud technology and two-sided market profitability in the operation coordination dimension have positive influence on the coordination effect.

Hypothesis (H3). The network crowdsourcing value coordination has positive correlation with the platform coordination effect. Wherein, the crowdsourcing reputation filtering, crowdsourcing value transmission and sharing value driving in the value coordination dimension have positive influence on the coordination effect.

3. Linear discriminant regression analysis on new-type business management

3.1. Linear discriminant regression

Provided that there are N objects, including the online labour service crowdsourcing effect $i = 1, 2, \dots, N$ from the

Download English Version:

<https://daneshyari.com/en/article/6853686>

Download Persian Version:

<https://daneshyari.com/article/6853686>

[Daneshyari.com](https://daneshyari.com)