

## Open Innovation as Human Resource Management Reform Strategy: A Case Study in the Xianrenling Tea Company, China

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(Received: August 19, 2020; Revised: October 20, 2020; Accepted: November 16, 2020)

### ABSTRACT

Currents trends in shared economies and globalization through the Internet make it difficult for traditional closed innovation in human resource management to maintain its claim as a valid alternative to open innovation. This difficulty is echoed in the ever-increasing number of companies seeking effective cooperation and collaborative open innovation with other organizations and personnel through two-way flow of resources and two-way transactions of intellectual property. This preference for the open approach to innovation is generally regarded as a demonstration of the voluntary reformation of human resource management and a progressive change in attitude of those who reject closed innovation.

This case study of the Xianrenling Tea Company (XTC) investigated the practice of open innovation as one way of reforming the company's human resource management. The study's primary aim was to gain insight into, and cast light on, the extent to which the company practiced this form of innovation as well as to ascertain the widest range of inter- agency and environmental factors that impinged on this practice. The study was quantitative in methodology and confined its search for information and data to all relevant documentary evidence. Its secondary aim was to potentially generate the construction of theory relevant to open innovation as reformative human resource management.

The study found that XTC applied open innovation in terms of its organizational structure, culture, incentives, talent cross-border thinking and exchanges, facilitative relationships between employer and employees, capital gain motivations, and the overall valuing of employees as human capital and hence of value. These findings lead to the conclusions that companies like XTC gain from the positive, productive, commercial, and social output of open innovation; that further and broader research could potentially have better significance in general than the present case study was able to achieve.

**Keywords:** Open Innovation, Human Resource Management Reform, XT Company

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## Introduction

With the advancement of economic globalization, the opening of the market has increased the mobility of high-quality talents, and the intervention of venture capital have provided commercialization channels for the innovation of enterprises [1]. Consequently, the traditional closed innovation model has been difficult to maintain a foothold. In the process of innovation, more and more companies seek effective cooperation with external organizations and personnel, and commercialize innovation results through internal and external channels to quickly respond to market demands and maximize commercial profits [2]. Therefore, collaborative open innovation based on the two-way flow of resources and the two-way transaction of intellectual property has become an inevitable choice for enterprises to obtain sustainable innovation capabilities and organizational success [3].

Many companies in developed countries have begun to explore and practice open innovation models of human resource management at the beginning of the 21st century, and have achieved commercial success as the result. For example, Procter & Gamble's launch of a C&D open innovation over a period of a few years lead to a drop of the company's R&D expenditure as a percentage of sales of 4.9% in 2000 to 2.6% in 2009, whereas their R&D success rate rose from 35% in 2000 to 65% in 2009 [4]. The like success of this practice by the well known Philips and Siemens company is further testimony of the efficacy of open innovation [2].

Evidence that most Chinese companies still adopt a closed innovation model at present, that consequently their use of external resources is very limited, that this not only prevents them from forming sustainable innovation capabilities but prevents them from forming international competitiveness due to issues such as their intellectual property deficit in international trade [5], does not bode well for their longevity as companies of worth. Unless they change their human resource approach through open innovation, they would also not gain in the way that the above companies are, nor would they be able to form international competitiveness due to issues such as their intellectual property deficit in international trade [5].

In the present study, the relevant theoretical underpinnings, principles, methods, processes, environmental conditions, and potential outcomes of a changed human resource approach through open innovation are investigated and analyzed. This scientific, literary exercise is supported by further examination and analysis of a case study of a selected company in China as 'case' wherein those theoretical underpinnings, principles, methods, processes, environmental conditions, and potential outcomes of open innovation are applicable. The latter is therefore treated as a fundamental change in corporate strategy and a reformation of human resource management on the basis that it is an important part of enterprise management [6].

## Literature Review

Since open innovation falls within the ambit, or may be taken as part, of human resource management strategy, the present study regards the description of human resource management (HRM) as essential for achieving any degree of understanding of that form of innovation and its correlation with HRM. Definitions and descriptions of HRM abound in the literature, of which the majority share common and divergent interpretations of it.

The present study adopts the proposal that HRM is basically a way of effectively managing company people so that their business or organization might gain a competitive edge over other like entities [4, 7, 8]. This proposal suggests that its

primary focus is on people as human capital vis-à-vis the systems they handle inside companies, or the latter as a whole. This management could therefore facilitate innovation to come about by, from, for, and with people.

In more broadly practical terms, HRM is meant to apply company policy and governmental legislation in its responsibility to plan, control, organise, develop, and systematise all essential segments of the operation of a company in order to maximise employee performance and achieve company goals [7]. Practical actions would therefore include the design, provision, monitoring and continual, prudent review of recruitment and selection, reward systems, codes of conduct, appraisal platforms, training and development opportunities, grievance and disciplinary procedures, leave opportunities, linkages with outside companies many of whom would be more competitive than collaborative on company-centre bases, liaison with relevant unions in favour of employees, and ways to respond to market opportunities, hurdles and changes especially with regard to customer demands or their willingness to partake in company growth and development [4, 8]. The latter action alongside all the others identified here, when done with clear goals, objectives, and with people-needs in mind, would be ideally conducive for innovative, creative, and economically beneficial approaches conducted on inside-out and outside-in bases [8]. Current trends in industry and commerce are indeed found to grapple with closed and open innovation, although the leaning is more to the latter. The outcome is bound to be the creation of company cultures that would become customer and employee averse or friendly [4].

HRM has the role of creating organisational culture as a direct result of that role. Whether it allows for closed or open innovation, it nonetheless has the tri-role of working in the interests of the employer, the employee, and customer. Each sub-set of 'people' has the need to feel valued and capable of contributing to the growth and development of the company [7]. Through its customer and inter-organisation relations, HRM has the task of gauging how and to what extent innovative inputs from those quarters would be economically feasible, productive, and beneficial to all concerned. The literature labels these actions as examples of enterprise management and enterprise resource management, thereby alluding to the vital role they play in successful company performance when applied prudently. With open innovation gaining more and more ground in HRM reformist strategies [4], it can be presumed that the above actions would potentially not only be contemporary but also progressively in favour of people-centred approaches.

Literature of note freely espouse several positive characteristics of 'open innovation' [9, 10, 11, 12]. Primary among those characteristics are its capability to allow human resources to cooperate with external organizations and individuals in collaborative ways, involving the use of external resources and technologies, and carrying out effective cooperative innovation and development [3]. This ethos is proposed in the notion that users, stakeholders, and scientific researchers should collaborate in product design and innovative changes of those products. It may be assumed that such collaboration by a free flow of innovative resources in the form of diverse sub-groups can only advance the creation of successful, goal-achieving enterprises. Traditional, outdated, 'closed' innovation is generally defined as being opposite to the secrecy and silo mentality of traditional corporate approaches, a characteristic that would not advance the above benefits to the degree that an 'open' approach would [13, 14].

A broad search of relevant research and theoretical proposals suggest several practical capabilities of 'open innovation' all of which promote its efficacy. Capabilities like the purposive distribution of purposively managed knowledge flows across organizational boundaries; use of model-based non-pecuniary and pecuniary mechanisms in line with the organization's

business strategy; an anti-firm-centric approach; use of creative, innovative consumers; utilisation of the skills, knowledge, and experience of workers as human capital; permeable liaison between the company and its environment; in- and outward transfer of innovations; valuing and use of knowledge in and derived from the global domain; and, systematic encouragement and exploration of the widest range of internal and external sources for innovation, have the combined potential to generate lasting benefits [9, 14, 15, 16, 17, 18]. These could include improved development productivity; improved planning and delivering projects; better digital transformation; new business models; innovative ecosystems; less costly research and development; and, more accurate market research and customer targeting [19, 20].

On the other hand, open innovation could be poorly placed inside human resource management reform when those in control of enterprises or projects are unaware or ignore its associated risks and challenges [3, 21]. In companies where the latter come in the form of indiscriminate revelation of confidential information, poor identification and adoption of external innovation, loss of competitive advantage through sharing intellectual property, and over-complex control of innovation, the expected positivity that could be derived from 'openness' would, at best, be compromised or, at worse, fail to produce good results.

The contemporary trends to adopt open forms of innovation in human resource management do not take place without their own particular challenges. The fundamental differences between the participants, operation methods, business models and intellectual property management of open innovation, and those of the closed innovation model necessitate a fundamental change in enterprise strategy in cases where the shift to an 'open' strategy is undertaken [3].

A view shared by the literature [10, 16, 18, 22], essential reformation actions would be such that they must be adequately geared and tailored to facilitate the particular principles, methods, and processes of the open innovation strategy. They have to be reflected in a 'borderless' organisational structure, flexibility in incentives, a marriage between talents of role players and innovative resources, open enterprise culture, values of equality and fairness, peaceful coexistence with external partners [7]. mutual trust, positive attitudes, non-discriminatory values, open interactive platforms on the Internet, research and development platforms, a fair degree of two-way mobility of innovative talents, and concrete responses to employees' career aspirations. Unless the latter are present, little or no transformation of the human resource management practice would be achieved [23, 24].

### **The 'Case' of Xianrenling Tea Company (XTC)**

The 'case' studied was that of the Xianrenling Tea Company (XTC). Research of its overall composition, workings, and production outcomes creates a picture of a medium sized company of sizeable industrial reputation, performance, and output. Briefly, these characteristics are: Founded 27 years ago in Fenggang County, Guizhou Province - the hometown of China's western tea sea and China's zinc-rich and selenium-rich organic tea - XTC is a comprehensive enterprise integrating organic tea cultivation, processing, marketing, scientific research, and ecotourism. The company has 2648 acres of organic tea base, a cross-tea professional cooperative, 246 executive members, and a tea garden area of more than 2,000 acres. It produces more than 300 tons of organic tea annually, with an output value of more than 40 million yuan [24]. Since its inception, XTC has maintained successful performance in its production of tea often acknowledged with awards for its tea selection (Cuiya, Maojian,

Xianzhu, Xianling Pearl and Maofeng): In 1993, XTC won the Best Quality Gold Award for Modern Chinese Family Health Products; In 2005, it passed the National Organic Food (OFDC) certification, and was named "Top Ten Famous Teas in Guizhou Province" in the same year; In 2008, its Cuiya tea won the Gold Award in the China (Hunan) Famous Green Tea Summit Forum; In the same year, Cuiya also won the gold medal of the 5th International Tea Fair in Beijing; In 2009, Cuiya won a further gold medal in the Chinese Tea Awards of the 16th Shanghai International Tea Culture Festival [24]. This was followed by XTC getting the award for being one of the "Top 100 Brands in Guizhou" in 2009-2010. It was also recognised as the "Famous Trademark of Guizhou Province" by the Guizhou Administration for Industry and Commerce for the following six consecutive years (2011-2017). At the time of the case study in 2019, it had the distinction of being one of the "Top Ten Private Enterprises in Guizhou Province" [24].

A pre-case study, documentary, and quantitative research of XTC documents found that, in addition to the above, the company has a HRM strategy premised on the philosophy that people were its main capital resource, and that it had to stay abreast of the latest developments in HRM reform, including open innovation. These findings prompted the decision to conduct an in-depth case study in XTC.

## Objective of the study

The study set out to establish (1) the particular HRM strategy adopted and practiced by XTC, (2) whether open innovation is used as form of HRM reformation, and if so, (3) what the ways were in which XTC applied open innovation in its HRM strategy, and (4), what the favorable and unfavorable environmental factors were that impinged on the XTC experience.

## Methodology

Consistent with the methodological principles of case study research, the present study adopted a quantitative methodology in an up-close, in-depth, and detailed examination of XTC as a contemporary phenomenon within its real-life context and having both commercial and social dimensions [25, 26, 27]. This approach was positivist-epistemological in so far as the reality of XTC was something that was objective and could be investigated and understood by a scientific examination of empirical evidence. It also recognised the unitary character of XTC and hence the choice of research methods [25, 26].

### Process, methods, and sources of data

The methods of research was holistic, gestaltist, and focussed on historical, descriptive, idiographic, and empirically-based knowledge of the company. The process of these methods involved systematic and thorough examination, analysis, and interpretation of available material found on the premises of XTC [27]. All data was gathered and organised in ways which allowed for clear objectivity by the researcher. The aim was to find evidence which could identify interrelationships between the various variables associated with the HRM practices of the company. These variables included the XTC, HRM strategy regarding open innovation as part of its reformation efforts. In particular, those variables included anomalies in the latter, outcomes of 'best practice', environmental influences, inter- and intra-organisational relationships, customer engagement, and any other unexpected variables which the study might expose [28].

Insights were sought in this way which would otherwise not have been attainable through statistical analysis. With the help of multiple sources, like organisational production records, records of relevant meetings, strategic plans, recorded levels of discourse and the dynamism of the process within the company borders, personal records of employees and executives, the data collection techniques were flexible and open-ended in order to facilitate fair analysis and interpretation. It was also regarded as a scientific prerogative that the complex interrelationships among its constituent parts had to be researched as heuristically as possible in order to understand the overall XTC system as a whole and without influence of XTC staff [27].

The methodological approach of the study produced descriptive richness and hypotheses reflected in insights into, and the light cast on, the change phenomenon of open innovation as part of the HRM reformation strategy of XTC. These results are in the form of various activities, platforms, and initiatives which XTC found to have consciously engaged in as evidence of their inclination towards open innovation.

## Results

In no particular order of prominence or importance, the study found the following to have been the main components of XTC's open innovation strategy:

### 1. Open Innovation Business Practice

XTC created the HOPE platform to transform the original single-source sourcing based on enterprise needs to the interaction between the supply and demand sectors. This platform is an ecological community whereby innovators gather as a huge global resource network, and a one-stop service platform that supports product innovation. It brings together suppliers and buyers of technology, knowledge, and creativity, provides interactive scenarios and tools, and promotes the birth of new products [24, 6, 19].

HOPE not only provides innovative services for various industries but also serves other companies and institutions. The clients served include large companies such as the energy industry, automobile industry, tobacco industry, electric power industry, scientific research institutions, and startup companies. It helps customers to add value to their enterprises; to solve the problem of where and how to innovate; to commercialize their innovation results and knowledge, and at the same time help them to find like-minded people and innovate together. In 2017, HOPE launched the "Innovation Partner Program" and invited a large number of experts in various fields to join, give full play to everyone's ingenuity, contribute to product innovation in all walks of life, and create a win-win situation [24].

As far as company development is concerned, the HOPE platform is specifically designed to (1) break the closed research and development (R&D) model, (2) build an innovation resource network, (3) allow for collaborative innovation with external resources, (4) establish and run a cyclical open innovation system, (5) create a win-win, shared innovation system. In order to realize these expectations, and over the period 2010 to 2020, HOPE set up platforms, and partner programs which could mobilize the envisaged open innovation ideals set by XTC [24].

XTC records suggest that the HOPE innovation platform is used as a business community interaction module, as a technology matching module, and as a creative transformation module thereby establishing a professional circle to form the sharing and interconnection of innovative knowledge, capture the latest industry technology trends, and realize innovation

resources so that ideas can continue to be produced. It is also a gathering platform for technology resources, technology demanders, technology suppliers, and ordinary consumers [24].

In practice, XTC's open innovation platform is a R&D platform. Through creative, online user interaction, technical resource system matching, offline product creative teamwork, expert evaluation teamwork, and technical management links, the internal and external innovation resources of the enterprise are dynamically matched in real time to achieve iterative product innovation. The biggest difference between the practice of XTC's HOPE platform and traditional closed innovation methods is that innovative technologies, resources, and talents are sourced from the whole world and also have real-time, dynamic characteristics [24].

## 2. Platform-based Systems for Open Innovation

### 2.1 Organization ecosystem

Since the impact of open innovation on organizational management is first manifested in the transformation of organizational structure and hence requires the organization to have blurred or no boundaries, XTC established a "Small and Micro" organizational entity fully independent and responsible for its own profits and losses. The relationship between the "Small and Micro" and the platform is no longer a subordinate relationship, but a win-win relationship. It is a completely market-oriented, free organization focusing on new opportunities in enterprises and new missions. As a result, the relationship between XTC's employees and the organization is no longer fixed, and the previous relationship of distance between superiors and subordinates no longer exists [24].

The organizational structure of XTC is a dynamic circular platform ecosystem, which maximizes the flexibility of the organizational structure and realizes the flat and borderless organizational structure. This enables efficient sharing of internal and external innovation resources in the circulation process, and improves the efficiency of the open innovation system. The company's platform-based ecosystem is therefore adapted to the implementation of its open innovation strategy [24].

### 2.2 Talent and product search system

Firstly, XTC's talent needs are expressed in market demand and company strategic goals. Through an open platform, it automatically attracts and gathers internal and external talents into the company to respond to market demand. As a result, the traditional methods of relying on recruitment and selection have been changed, the utilization rate of talents has been increased, and the requirements of the times have been adapted.

Secondly, when there is market demand for a certain type of technical product, the company's "Orders" begin to appear. The platform would display orders, and the "Small and Micro's" could obtain opportunities through independent declaration or grab orders. Specifically, after the internal and external personnel participate in the platform, an independent team is formed which summarize the user's opinions and propose feasible solutions. Finally, the company discusses which "Small and Micro's" entities are the most suitable to accept the order. In the process of completing the order, the chosen "Small and Micro" entity appoints internal and external personnel to participate in joint discussions during the entire process of product development, design, production, sales, and service.



### 3. Salary Incentives

#### 3.1 Gambling salary sharing

XTC has established an over-value sharing platform for gambling. The "Small and Micro" unit authorize it as the undertaking of gambling before receiving the order, promising the target value of the "Orders" and the over-value sharing space. After reaching the gambling goal, participants carry out the agreement and promise to share the value of the bet. Table 1 shows the differences between XTC's gambling salary sharing incentive mechanism and traditional salary incentive mechanisms.

**Table 1** Comparison of XTC's gambling salary-sharing incentive and traditional salary incentives

| Comparison Items         | Traditional salary incentive                                      | Gambling salary sharing   |
|--------------------------|---|---|
| Payer                    | Enterprise  | User  |
| Standard of salary level | Salary based on performance                                       | Salary based on "Orders"  |
| Focus points             | Achievements and performance                                      | The value of current and future performance                                       |
| Changes in salary        | Hard- to- adjust salary   | Salary linked to market value   |
| Motivation of employee   | Passive motivating force,-employees in a competitive relationship | Active driving force; a win-win relationship between employees with a common goal |

#### 3.2 Incentive mechanism for gambling salary sharing

As a first step, XTC changed the main body of salary payment, breaking through the limitation that human resources are the primary expense of enterprises. Through the "Orders" mechanism, XTC is enabled to realize the value of its customers while realizing the value of human resources, an action which has solved the difficult problem of independent innovation in the past [24].

Next, XTC changed the traditional salary system into a dynamic salary form linked to market value. Traditional salary systems are often not easy to change and cannot be linked to external market values [25, 19]. XT Company improves the innovation ability and technical level of employees by improving its training system.

XTC's open innovation HRM strategy allows it to regard "inheritance" as its enterprise culture and "entrepreneurship and innovation" as its enterprise development concept. It sees this as a way of strengthening its construction of an enterprise culture. Furthermore, XTC conducts entrepreneurship training and education of employees through different methods and channels, such as company lectures, exchange meetings, and exchanges and learning with well-known companies. Through continuous exploration of new ideas and innovation, XTC has put much effort into education, training, and cultural construction thereby injecting inspirational power into the construction of an innovative human resource system [24].



#### 4. Customer-based Human Resource Management Platform System

In order to effectively implement the open innovation strategy, XTC uses a customer-based human resources platform system which includes resource innovation platforms of shared service, accessed talent, and partner support. These platform systems each have professional talents and professional resources in various fields. They cooperate with each other thereby enhancing the efficiency of XTC human resource management and increasing the sharing effect of the open innovation model interactive platform and resource library [24].

## Discussion

The present study has found the above results as adequate evidence of the positivity with which the shift from closed to open innovation had been embarked upon in XTC's HRM strategy. A thematic and in-depth analysis of those results shows comparisons between closed and open innovation, and in particular, the theoretical nuances of the open form. In order to conduct the analysis within a conceptual framework, the present study leaned primarily on an amalgamation of the theories of collaboration offered by Hofman [5], Diaz-Kobe and Morris [1], and Colby [29]. The results of the study are graphically summarized in Table 2.

**Table 2** XTC's open innovation vis-à-vis traditional innovation

| HRM Items  | Traditional   | XTC's   |
|--|---|---|
| Awareness of the boundaries of talent management | Bounded and closed talents; fixed departments and positions | Cross-border talents ; internal and external talents as the human resources of the enterprise |
| The relationship of employee and employer        | Principal-agent   | Create, win-win, and share  |
| The employment arrangements                      | Capital wage labor  | Employee-Employer Interaction   |
| Company culture                                  | Executive culture   | Self-driven culture   |
| The formation of employee value                  | Valuing employees by creating profits for the company       | Valuing employees and customers   |

An unpacking of the units of the research in Table 2 suggests the following main theoretical underpinnings, principles, conceptual bases, and utility of open innovation as HRM reform in XTC:

#### 1. Cross-border talent

Traditional business management theory based on the strict division of labor within enterprises, fixed positions, strict job responsibilities, "boundaries" between departments and positions, little or no access to the organization as a whole, and the confinement of the personnel involved in innovation activities to within the enterprise, is a limiting, non-beneficial, and non-democratic form of HRM [1]. XTC's subversion of the traditional handling of talents within both internal and external

arenas is a clear way of building group cohesion [5, 29]. This approach has the potential to expand the horizons of the enterprise of XTC, relax the tensions that normally accompany separateness between people inside its own physical borders, and hence can only extract the best out of people who invariably have inherent talents which XTC could harness and put to good use [39]. Ultimately, the 'open' approach in innovation seeking is therefore logically sensible and conducive to better production output [1].

## **2. Creating, win-win, and sharing**

XCT's self-organized, independent, "Small and Micro" ecosystem and its acquired powers in decision-making, distribution, and scheduling appears to be an efficient way of granting employees a share in the company [5, 40]. Alongside the HOPE platform, this is another mechanism and value mind-set for creating group cohesion of the sort that would be absent in conditions under closed innovation [19]. All participants are therefore bound to gain on equal terms and to similar degrees. Its structure and composition would not be grounds for status seeking, undue competitive engagements, and relationship conflicts but would instead put the team first and allow for the mutual influencing of each member in line with company objectives.

## **3. Employee – employer interaction**

XTC's adoption of the customer payments rather than enterprise payments, the incentive mechanism for gambling based on sharing, and acknowledgement that market demand is matched to the value of employees, can only encourage better organization of the work, production time- and- motion, and eventually stronger niche awareness and market status value of the company. Moreover, the latter could cause salaries to escalate which would serve as a sustainable incentive for employees working in cooperative and turn-taking ways with others [5]. Overall, close employee-employer relations can, per se, only be to the advantage of the company; companies are run by people and the closer the distance between employees and employers, the better the chances of higher returns [1].

## **4. Self-driven Culture**

The shift from an executive-driven to a self-driven culture has the advantage of collaborative working arrangements and execution. Should XCT forge ahead with its production of quality teas and an enterprise operation based on concrete confidence in people's ability to self-mobilize their engagement in the company as well as their capacity to innovate XCT's venture, its future of success and its retention of its status as one of the top producers in the country would be ensured [30]. This is an HRM strategy consistent with literature which champions the capacity of open innovation to satisfy stakeholders, facilitate open behavior and people-recognition, stimulate entrepreneurship, and allow for open governance [1, 5, 38].

## **5. Valuing employees and customers**

The practice of functional complementarity between various organizational departments, and cross-border travelling between employees and customers resonates, in the first instance, with the idea that employees are also customers within a common eco-system [5, 40]. Encouraging employees to understand and develop products from the perspective of customers and hence strengthening employees and customer links, XTC is propagating collaboration in a group cohesive and mutually influential manner. In the process, employees realize their value as human capital in addition to their value as company employees. As with all other expressions and capabilities of open innovation analyzed above, valuing employees and customers

as equals could effectively help XTC to continue its endeavor to use open innovation in production and resource measures to the economic benefit of itself and the socio-economic contentment of employees and customers [1, 5, 29, 38].

## Summary and Conclusion

Analysis of the findings of the present study of the single case of XTC has limited universality. It has nonetheless highlighted significant characteristics or aspects of open innovation within the ambit of HRM in an industrial setting. To some extent, these are echoed in recent literature in so far as those characteristics are both positive and negative.

Effective application of open innovation would in the first instance require conducive, environmental conditions which would in turn amount to an operational culture especially geared for it. Appropriate organization policies, HRM processes, and role players like employers, internal and external employees, customers, and stakeholders who subscribe fully to its aims, ideals, and objectives, must be collaboratively lined up to handle the particular time-and-motion that distinguishes it from the traditional, closed innovation (now generally losing favor in the commercial and industrial sectors).

The organizational behavior of XTC could only be gauged through the scope of the documentary research of the case study. Without a qualitative exercise alongside that research, it was therefore not possible to ascertain whether the data derived was true or false. XTC's many accolades, however, as a top-performing company, is strong and indisputable evidence - whether entirely or partially – that their open innovation within HRM reformed strategy had contributed to those achievements and recognition. The platforms, organizational culture, people, and other XTC mechanisms identified by the present study might well have been the sources of that contribution.

It is also not helpful that the documentary evidence presented to and used by the present research did not overtly express any misgivings about XTC's choice of open innovation, or any negative aspects or outcomes of it in the XTC context. Despite this gap in recording, it is clear that open innovation had over the recent past become the norm at XTC.

## Significance of the Study

Whereas open innovation is theoretically and empirically shown to be a feasible change strategy for contemporary HRM, this small-scale study confirms that it has the potential to be practiced in a variety of ways and time frames; that it is not disadvantaged by size of practice site or nature of industry or enterprise. This view is supported by the findings of, and analyses derived from, the study of the moderately-sized XTC where open innovation was not subject to time frames. Such findings and analyses therefore present as valuable sources of insight for extrapolation purposes and guidance to others interested in examining how open innovation is being attempted in the industrial arena.

The study is also significant in that it is an example of the utility and efficacy of the case study method of research for a topic such as open innovation [31, 32, 33]. This is particularly so on the basis of the many theoretical and practical capabilities of the case study method as an accurate, valid, and trustworthy scientific approach for research. These qualities are clearly reflected in the quality of the insights gained which could be used for further theory construction relevant to HRM reformation, enterprise management, and open innovation [28].

## Research Limitations and Future Prospects

The primary limit of this case study is that it does not lend itself to universal applicability in a general sense. This limited universality heightens the need for future research into a topic such as open innovation to be done by way of multi-case, comparative quantification or analysis to achieve more in-depth insight and understanding of it. The hope is that the latter comparative approach would help to improve the universality and reliability of research conclusions usually spawned by single case studies [34, 35, 36, 37]. Once this becomes a research norm, there would be the added advantage of more realistic theory generation as well as theory and hypothesis testing.

## Acknowledgements

This research is a part of the thesis “Human Resource Management of Small and Medium Enterprises: A Case Study of Xianrenling Tea Company, Fenggang County, Guizhou Province, China” which supported by Faculty of Humanities and Social Sciences, Prince of Songkla University, Pattani campus. Dr. Niwet Arunberkfa, Dr. Kumarashwaran Kumar and Xianrenling Tea Company for research assistance which I would like to thank.

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