

ASSIGNMENT 1: Blogs

JIAQI HU 2005204

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Entry 1
(word count: 374)

This is the first blog for this writing assignment of Applied Quantitative Business Research Course. According to the topic, I will firstly reflect on my former research, then talk about my perception and expectation of this course.

In my postgraduate study, my area was rural tourism. The name of my thesis was "Study on the Development Strategy of Rural Tourism in Ancient Didi Village in Ebian Yi Autonomous County of Sichuan Province". For this thesis, I had my internship in a hotel built in a mountain-area village. During that time, I used questionnaires and interviews for data collecting, then proposed some strategies based on the results. Since I just started my study in economy area, my knowledge background and research ability was limited. Dr. Promise pointed out one of my mistakes when I shared the sampling process on the class. I plan to discuss it in the next entry.

Now I am still in a primary stage of the DBA study, which means I have not made the final decision of my thesis topic. However, I did discuss it with my tutor of postgraduate degree and with Caroline in the interview. I would like to keep focusing on tourism, based on my postgraduate study. If I have a chance to come to UK with no limitation of traveling around in the future, I will probably do a comparison research between rural tourism in EU and China. This could be a challenging topic, which needs relevant and precise data analysis to get significant results.

According to Jackson, quantitative paradigm provides precise and reliable knowledge in limited investigation, which could explain complicated social phenomena and make prediction.¹ And Nielsen also said that quantitative research aims to construct a precise knowledge system by specific analysis methods.²

Therefore, in the current stage, learning quantitative research method is the most important step for me to continue on my academic career. I have two expectations of this course. Firstly, I shall learn and master the usage of SPSS, including inputting data, using different types of analysis methods, reading the results and using them properly in academic writing.

Secondly, I need to cultivate my logical thinking in quantitative way, which could help me with choosing valuable subject, establishing prediction and hypothesis.

¹ Jackson, M.R (2015) 'Resistance to Qual/Quant Parity: Why the "Paradigm" Discussion Can't Be Avoided', *Qualitative psychology (Washington, D.C.)*, 2(2), pp. 181-198.

² Nielsen, R.B.(2011) 'Cues to Quality in Quantitative Research Papers', *Family and consumer sciences research journal*, 40(1), pp. 85-89.

Entry 2
(word count: 476)

This entry should be about the biggest challenges of using quantitative research methods in my own organization. But I have just finished my master degree study and never had a formal job before. Therefore, I will discuss the sampling problem I encountered when I was doing research in a hotel, where I also had my internship.

The hotel is called CHANYI, which is anti-poverty programme invested by a property enterprise. It is built in a old village in EBIAN Autonomous County, located in the XIAOLIANGSHAN mountain area in southwestern Sichuan. Due to its location on the border and difficult natural conditions, it has always been a deeply impoverished county with difficulty in getting rid of poverty.

The lobby of the hotel was built in the center of village, and all the rooms were transformed by houses of villagers, who are employed by the hotel or open shops and restaurants around the hotel.

During my internship, I did two questionnaire surveys in the village, for satisfaction and expectation of both villagers and tourists. The problem occurred in the villagers side. Since the village is located in a Minority Autonomous County, the residents belong to an ethnic minority called YI. Besides, most of young and educated villagers moved to the county town or other cities for working.

Therefore, many participants could not understand Mandarin. which made the survey difficult.

In order to accomplish the survey, I adopted two solutions. Firstly, I simplified the language I used for the questions and reduced the number of questions. Secondly, I applied for two employees of the hotel, who knows both Mandarin and YI well, as translators assisting the survey.

In that period, from the perspective of my supervisor and the further research process, this survey did acquire data I needed successfully. But when I shared this experience with Dr. Promise, he pointed out that this process was not professional, at DBA level. I should have finished the pilot survey before I started the formal survey.

"A pilot study, pilot project, pilot test, or pilot experiment is a small scale preliminary study conducted in order to evaluate feasibility, duration, cost, adverse events, and improve upon the study design prior to performance of a full-scale research project. It is usually adopted for testing if relevant population is suitable for the survey, before quantitative research."³

According to Thabanem, there should include 13 items: Title and abstract, Background, Methods, interventions, Objectives, Outcomes, Sample size, Feasibility criteria, Statistical Analysis, Ethical Aspects, Participant Flow, Recruitment, Baseline Data.⁴

³ WIKIPEDIA (2020) *Pilot experiment*. Available at: https://en.wikipedia.org/wiki/Pilot_experiment (Accessed: 17 November 2020)

⁴ THABANE, L. et. al. (2010). 'A tutorial on pilot studies: the what, why and how', *BMC medical research methodology*, **10**(1), pp. 1.

If I start a similar research in the future, which could be possible because of my ideal research area, I shall confirm that the participants are suitable for my survey in at least 2 aspects:

1. To what extent the participants can understand the questionnaire.
2. To what extent the participants are involved in, or acknowledge the local tourism industry.

Entry 3

(word count: 360)

The topic of this entry is to explain the reason why sampling could be regarded as the foundation of robust quantitative research.

"In statistics, quality assurance, and survey methodology, sampling is the selection of a subset (a statistical sample) of individuals from within a statistical population to estimate characteristics of the whole population. Statisticians attempt for the samples to represent the population in question. In business and medical research, sampling is widely used for gathering information about a population. Acceptance sampling is used to determine if a production lot of material meets the governing specifications." ⁵

Therefore, sampling is the method that makes large-scale quantitative research feasible. For example, if we decide to study on the average income of a city, it could be a vast workload with massive expense to investigate all the citizens separately. If we use sampling, we could get the representative data more efficiently with lower cost.

The method and procedure of sampling could probably have affects on the quantitative research. Quantitative research is about explain a particular phenomenon, by using mathematically-based methods to analyze numerical data. ⁶ Because the quantitative research is based on data, and sampling is the process of data collection. Groups of valid and representative data underpin a meaningful quantitative research. "Where the sample comes from affects its representativeness."

⁷ In sampling process, we need try to choose a proper size of population. If the subjects are people, a pilot test could be necessary to make sure the participants are capable of answering the questions. And we shall use probability sampling to insure that the respondents are "randomly" sampled, which means that at each respondent in the population has a known probability of being sampled.

² Processes above improve to validity and representativeness of the data collection, which should be fundamental works for a certain quantitative research. For instance, when I did my last research, I spent three months in the village for

⁵ WIKIPEDIA(2020)Sampling. Available at: [https://en.wikipedia.org/wiki/Sampling_\(statistics\)](https://en.wikipedia.org/wiki/Sampling_(statistics))(Accessed, 15 November 2020)

⁶ MCNABB, D.E.(2013) 'Fundamentals of Quantitative Research. Research Methods in Public Administration and Nonprofit Management', *Routledge*, pp. 159-169.

⁷ LINDA SHIELDS, 2008. Sampling in quantitative area, *Paediatric Nursing*.20(5), pp. 2005.

sampling to make sure my data collection was reliable and persuasive, because the sampling problem I mentioned in entry 2.

Furthermore, when we decide whether to use parametric or non-parametric analysis for the research, we also need use sample to do the population distribution.

Entry 4

(word count: 394)

This entry is about Critically evaluating the ethical issues of Netflix's approach to using big data and machine learning to improve click rates. Netflix could be one of the most famous and successful audiovisual platforms in the world, which has expanded into 243 countries until 2016.⁸ Utilising of big data, by algorithmic recommendation specifically, is believed to be one of the successful strategies of its rise, starting with the "Netflix Prize".⁹ The prize is an open competition for the best collaborative filtering algorithm to predict user ratings for films, based on previous ratings without any other information about the users or films, i.e. without the users or the films being identified except by numbers assigned for the contest. And it was finally won by the BellKor's Pragmatic Chaos team, which increased the prediction rate by 10.06%.¹⁰

By registration, form filling and continue watching, customers provide their information actively or passively to Netflix, which helps it to know about the favors and habits of its users. The technology Netflix uses to deal with collected data is called ETL(extract, transform, and load).¹¹

Technology of analyzing big data contributes significantly to Netflix's business decision, including but not limited to service quality improvement, catalog design, customer satisfaction maintaining. Then Netflix built a recommendation system, offering the favoured content to customers automatically, which is instrumental in maintaining long-term customers.¹¹

Although utilising big data could be not only beneficial to Netflix, but also convenient for customers, it still needs to be aware of relevant ethical issues. Big data is often regarded as a morally neutral asset while there could be ignored hidden ethical danger.¹²

⁸ AGUIAR, L. and WALDFOGEL, J.(2017) 'Netflix: global hegemon or facilitator of frictionless digital trade?', *Journal of cultural economics*, 42(3), pp. 419-445.

⁹ MÓNICA, H. S. et al. (2018) 'Online recommendation systems in the Spanish Audiovisual market: comparative analysis between Atresmedia, Movistar+ and Netflix', *UCJC Business and Society Review*, (60), pp. 54-89.

¹⁰ Wikipedia(2020)*Netflix Prize*. Available at: https://en.wikipedia.org/wiki/Netflix_Prize (Accessed 17 November 2020)

¹¹ FERNÁNDEZ, M. E. et. al. (2016) 'Data management in audiovisual business: Netflix as a case study', *El profesional de la informacion*, 25(4), pp. 568.

¹² MARTIN, K.E.(2015) 'Ethical issues in the Big Data industry. School', *MIS Quarterly Executive*, 14(2), pp. 67-85.

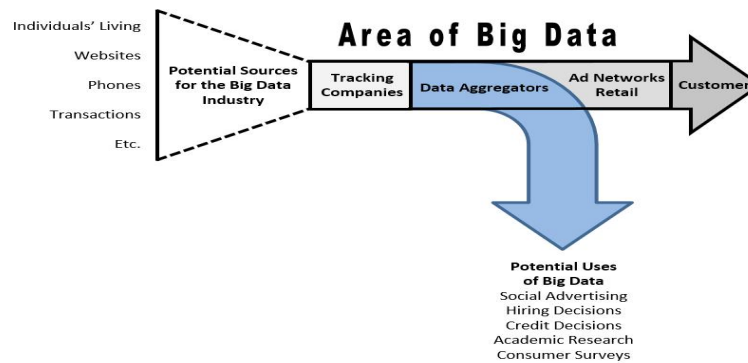


figure1:Example of Information Supply Chain Within the Big Data Industry
(source:Martin, 2015)¹³

As the figure 1 shows, there could potential risk of information leaking during the supply chain of big data industry, which could cause unwillingly secondary usage of costumer information or illegally access by government.¹⁴

Besides, during the big data analysis, costumer might be categorized into certain groups for their gender, age, background or personal experience, which could be offensive.¹⁴

In conclusion, for Netflix, big data utilising and machine learning could be efficient way to improve service quality and costumer satisfaction. And in modern information age, usage of big data might be inevitable. But both companies and individuals should be aware of ethical issues, such as potential violation of privacy, when dealing with it.

Entry 5

(word count: 307)

This entry is about a quote: ‘A statistically significant finding gives you a clue, suggesting a promising place to focus your research energy. The significance test is the detective, not the judge’. ¹⁵This quote is from a New York Best Selling book: *How not to be wrong*, written by Jordan Ellenberg, who is a American mathematician. This book connects various economic and societal philosophies with basic mathematics and statistical principles.¹⁶

I found this quote in chapter 9, part 2, named The international journal of haruspicy. Haruspicy means a kind of monks in ancient Rome, who did divination by sheep innards. In this chapter, the author uses several examples and a cartoon to explain that the result of significance test does not determine whether the hypothesis is correct, because there could be coincidences and errors due to random sampling and real-time

¹³ MARTIN, K.E.(2015)' Ethical issues in the Big Data industry. School', *MIS Quarterly Executive*, 14(2), pp. 72. figure 1.

¹⁴ FERNÁNDEZ, M.E. and GONZÁLEZ, V. M., 2018. Analytic surveillance: Big data business models in the time of privacy awareness. *El profesional de la informacion*, 27(2), pp. 402-410.

¹⁵ Ellenberg, J.(2014) *How not to be wrong*. 1st edn. New York: Penguin Press.

¹⁶ Wikipedia. (2020)*How not to be wrong*. Available at https://en.wikipedia.org/wiki/How_Not_to_Be_Wrong#Summary (Accessed: 23 November 2020)

changes of items. And it is not scientific to satisfy P value by ‘torturing’ the data.¹ For instance, in medical field, researchers prefer positive result, in order to get their study published.¹⁷ And Ellenberg also pointed out that journals are not willing to publish repeating experiments with same results, which causes difficulty for scientists to do it.¹⁵

To improve this situation, Ellenberg suggested to provide confidence intervals based on the significance test, which need researchers to consider more possibilities.¹ Sterne and Smith also advised that we shall use P value which is more precise, because according to their research, more accurate the P value is, less errors would occur.¹⁷

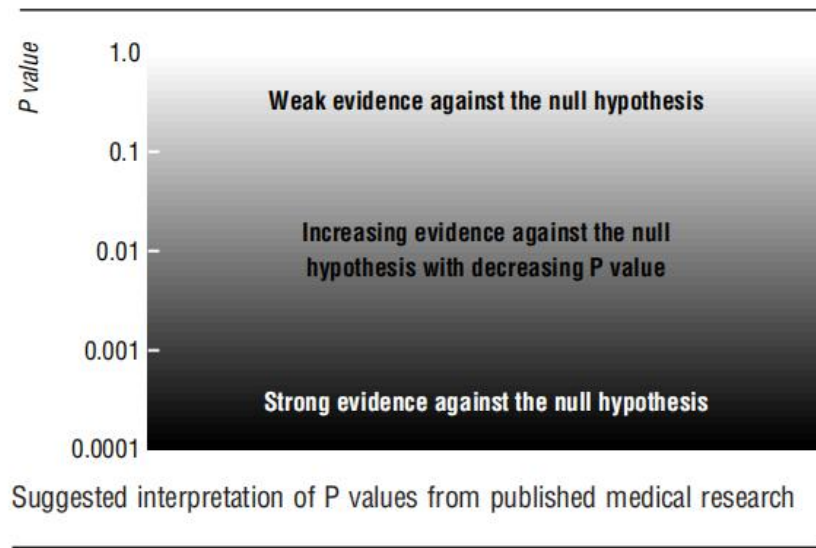


Figure 2: suggested interpretation of P values (Source: Sterne and Smith, 2001)¹⁸

For my own research, it would probably need to figure out factors that influence industries development, residents income, tourists satisfaction, etc. I shall be careful about significance test, because there could be complicated variables and differences of seasons and virus situation.

Entry 6

(word count: 354)

I would like to discuss my ideal DBA research area in this entry, since there is no specified topic. Rural tourism is the area of my master study, for which I have did plenty of literature reading and field visits, then finished my thesis for master degree. The specific research subject of my master study was rural tourism in minority area of China. For my DBA research, based on my previous study, I plan to robust a comparison research between rural tourism in China and in Europe. According to OECD (Organization for Economic Co-operation and Development),

¹⁷ STERNE, J.A.C. and SMITH, G.D.(2001) ‘Sifting the evidence—what's wrong with significance tests?’ *Physical therapy*, 81(8), pp.226-231.

¹⁸ STERNE, J.A.C. and SMITH, G.D.(2001) ‘Sifting the evidence—what's wrong with significance tests?’ *Physical therapy*, 81(8), pp.229.

rural tourism should be located in rural area, which has limited population and land size. It shall show rural features in functions, buildings, traditions and development.¹⁹ It includes mixed types of activities and events.



Figure 3: different forms of rural tourism(source: Stainton, 2020)²⁰

Many Chinese researchers believe that rural tourism originated from Europe, where it has been a developed industry. Researchers in Europe consider rural tourism as a tool to develop economy in lagging regions²¹ and enhance senses of national identity and belonging.²²

Rural tourism usually exists in China as rural staying or ancient town/village tourism, supplying rural scenery, agricultural experience and characteristic food, which often organized as anti-poverty programs by local governments. In recent years, rural tourism with immersive experience emerges in China, due to counter-urbanization, anti-tourism and active ageing.²³ Yet, rural tourism development in China could be conflicting, because of the agricultural social condition in Chinese rural area.²⁴

During reading, I found detailed comparison study of recent years still lacks. I have already had a certain academic foundation of and some accesses to rural tourism in China. In my DBA program, I would probably stay in UK for at least 12 months, which would provide me a valuable opportunity to do field visit of European rural tourism.

When I shared this idea with Dr. Promise, he pointed out that it is a valuable subject, while it could be rather challenging. I would keep reading English literature of rural tourism, master more quantitative and qualitative research methods and communicate with lectures, then decide whether I could start it.

¹⁹ OECD(1994)*Rural tourism*. Available at: <https://www.oecd.org/cfe/tourism/2755218.pdf>(Accessed 22 November 2020)

²⁰ Tourism teacher(2020)*Rural tourism explained: What, where and why*. Available at: <https://tourismteacher.com/rural-tourism/#0-what-is-rural-tourism> (Accessed 22 November 2020)

²¹ SAXENA, G. and ILBERY, B(2008) 'Integrated rural tourism a border case study', *Annals of tourism research*, 35(1), pp. 233-254.

²² SILVA, L. and LEAL, J. (2015) 'Rural tourism and national identity building in contemporary Europe: Evidence from Portugal', *Journal of rural studies*, 38, pp. 109-119.

²³ CHENG, H. et. al. (2020) 'Rural stay: a new type of rural tourism in China', *Journal of travel & tourism marketing*, 37(6), pp. 711-726.

²⁴ WANG, L. (2019) 'Conflict in tourism development in rural China', *Tourism management*, 70, pp. 188-200.

Entry 7

(word count: 471)

This is the final entry of the assignment, which is about how would I use quantitative methods in my DBA research. Last week we had the last session of Applied Quantitative Business Research. During this course, we learn basic knowledge of data collection and SPSS analysis, which could help us figure out the significant factors in the research.

As I discussed in former entries, my ideal research area for DBA is rural tourism. If the COVID-19 situation loose up, I would try to robust a comparison research between rural tourism in China and Europe, by which I could provide strategies to rural tourism development in China. In primary plan, I would choose an ancient town in Sichuan, China and a rural tourism attraction of similar size in UK, Portugal or Greece. I still do not have hypothesis, but it could be about tourists satisfaction, tourism income, etc.

For data collection, questionnaires and interviews to tourists, commercial tenants or residents would be needed. As entry 2 mentioned, before the formal survey starts, a pilot survey shall be necessary. For tourists, interviews could be used as pre-survey, in which we could gather the information about family background, the motivation of traveling and preferred activities of participants. In Cheng and Yang's pre-survey, they chose 29 participants by convenience sampling.²⁵ If the study site is a village or town of minority, we need to make sure that participants are capable of understanding and answering questions in English or Mandarin. In Cheng and Yang's investigation, they filled most of questionnaires during the investigation, because elder participants had difficulty in reading.²⁵

For formal investigation design, Cheng and Yang tried to figure out the visitors' motivations by three topics: rural tourism, second-home tourism and Retirement service and the place.²⁵ We could also collect spending and employment information from traveling agencies or government websites, by which I could get information related with industry development and its influence on region economy.²⁶

After data collection, I shall analyse it with SPSS. According to quantitative research methods I have learned for now, firstly descriptive analysis, correlative analysis should be used to check the reliability and validity of the data. Then I would use factor analysis and regression analysis to get the factors which are most significant for the hypothesis. Cheng and Yang used principle component analysis and varimax rotation to obtain 5 factors from motivation responses, then put them into MDS.²⁵ Assaf gave some helpful suggestions for doing quantitative research in tourism, such as keeping the regression model simple, paying more attention on the residuals, etc.²⁷

After reading relevant literature, I recognize that there are still many concepts and methods of quantitative research which are out of my competencies. I shall keep learning in my future study to make sure I can robust a quantitative analysis in my thesis properly.

²⁵ CHENG, H. et. al. (2020) 'Rural stay: a new type of rural tourism in China', *Journal of travel & tourism marketing*, 37(6), pp. 711-726.

²⁶ Ismayilov, V. et. al. (2020) The role of rural tourism in the development of the rural economy. *Journal of Economic Sciences: Theory & Practice*. 77(1), pp. 51-64.

²⁷ ASSAF, A.G. and TSIONAS, M.G. (2019) 'Quantitative research in tourism and hospitality: an agenda for best-practice recommendations', *International journal of contemporary hospitality management*, 31(7), pp. 2776-2787.

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