

# Moderating Role of Loan Size and Nature of Business in Relation to the Effect of Bank Credit on Income Level of Clients in Rural and Urban Areas of Pakistan

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**Abstract:** The core aim of this study is to explaining the effect of bank loan on level of clients' income with moderating effect of loan size and nature of business in ten different cities of Pakistan. Researchers use questionnaire to collect the primary data of 1000 borrowers of Banks, and received 900 responses form clients. Researchers used Smart PLS to analysis the data of study and after analysis Researchers concluded that there is significant impact of Bank loan on Level of income with moderators', both moderators loan size and nature of business have significant impact on bank loan and Income Level relationship.

**Key Words:** Bank loan, Level of Income, loan size and Nature of Business

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## Overview of study

Financial sector of any country is backbone of any country if its perform well then it will increase financial activities in country and that will increase economic growth as highlighted in Financial liberation theory(Awojobi, 2014) but argued by several researcher like "Robinson during 1952" thought "where enterprise leads, finance follows" means economic development leads financial sector and concurrently "Lucas in 1988" said opposing economic professional impression and

simplify the “role of financial indicators in growth of economy” (Andersen & Tarp, 2003). Financial sector includes commercial banks, microfinance banks, investment banks, assets management, insurance company and leasing company etc. here researcher want to core focus on banks and microfinance banks (Mohsin, Bashir, & Tariq, 2018) both types of bank having some similar and some different objective like core objective of micro banks gave microloans to poor or underprivileged people to reduce poverty several researchers highlighted(Khanam, Mohiuddin, Hoque, & Webe, 2018; Awan & Ibrahim, 2015; Khan, et al., 2020; Tasos, Ahmed, Awan, & Waqas, 2020; Niaz & Iqbal, 2019; Ahmed & Khoso, 2020). whereas, Commercial banks have some similarly core focuses on commercial activities such as receiving utilities bills, receiving deposit, lending commercial loan(Ozili & Outa, 2017) to clients, and rural areas lending agriculture loan to clients (Florence & Nathan, 2020; Alina, et al., 2016) so researcher try to check is there any effect of loans on their clients income of both types of banks. As researcher suggested providing of monetary support for farming has been a key involvement approach for reduction of poverty (Alina, et al., 2016) so after getting loans from banks clients used that funds in effective and efficient manner to increase their income from farming and their small business (Ahmed & Khoso, 2020). Moreover, women participation in this fields in rural areas of Pakistan are also very significant several studies was conducted in different areas of Punjab and Sindh highlighted by (Malik, Mustafa, Anwar, & Iqba, 2020; Niaz & Iqbal, 2019; Ahmed & Khoso, 2020). This women empowerment is suggested by (World Bank , 2018; ADB, 2012) initially in MDGs and later on in SDGs under 2030 vision it need more focused by developing countries like Pakistan, India, Bangladesh etc.. in Asian countries and several Africans and Latin Americans countries as well and rural developing economies uses loans and grew their businesses in fields of agriculture and farming a study highlighted that student form business management can also work in agribusiness said by (Deshmukh, Hude, Balutkar, & Lenka, 2021).

### **Objective of this study**

The core objective of this study is to identify that there is effect on loans of both types of banks on client’s income or not and also same cause and effect relation with moderating effect of loan size and nature of business.

### **Problem statement**

The core and essential issue is banks are performing well but clients of that banks are struggling in our country especially in rural areas. They are try to increase their income and payback loans due to high interest rate and inflation they are unable to do so.

### **Importance of the Study**

The result of this paper helps all commercial and microfinance banks that are their loans creating impact on consumer’s income or not and Moreover, so they might improve or change their procedures and policy of landing loans to clients. Furthermore, this study is helpful for reader, research and PhD scholar as well so they know about this comparative analysis of both

heterogeneous banking sector. Moreover, these poverty, well-being, quality of education and women empowerment suggested by (World Bank, 2018) as SDGs. so this research is directly related with SDGs in so the result will be help for other researchers.

### Reviewing the literature

Several studies were conducted to analyzed the impact of banking loans on consumer income generation methods such as SMEs, agriculture, other businesses and similar study also done by researcher in the field of microfinance. So author want to analyze the effect of bank loan on clients of both banks and microfinance collectively. According to Ahmed and Khoso (2020) there is significant impact of microloans on poverty decline, empowerment of women and self-employment in rural and urban areas in Sindh in their both studies, Moreover other researcher are also highlighted that women empowerments in Pakistan through microfinancing (Malik, Mustafa, Anwar, & Iqba, 2020). Another researcher highlighted that Poverty is commonly used phenomenon in rural areas and poor people work in different areas of agriculture such as farming, livestock farming, fishery, forestry due to lack of education or unskilled personals so lack of opportunity in job employment said by (Biswal, Mishra, Mishra, & Sarangi, 2021) but here in researcher's country the urban poverty rate is increasing due to great migration from rural to urban areas for search of job and employment opportunities said by (Ahmed & Khoso, 2020).

A study highlighted that financial inclusion for financial well begin of clients in Indonesia study's results shows that bank loans has significant impact on sale turnover but the key barrier of SMEs is enlarge their Working Capital, Moreover, researcher suggest that small businesses are not records their financial matters properly said by (Gitaharie & Soelistianingsih, 2018). Another study argued that there is no significant impact of microfinance on welfare of clients at Botswana said by (Okurut, Kagiso, Ama, & Okurut, 2014) and highlighted the same variables such as quality of education, job opportunities in both private and public sector must be supported by government for generation of sufficient income level. Moreover, these poverty, well-being, quality of education and women empowerment suggested by (World Bank, 2018) as SDGs.

Ariful, Das, & Ashiqur (2017) according to researchers that the impact of MF loans having significant impact on client's expenditure, saving and their income at Bangladesh, same as suggested by researcher in Pakistan by (Ahmed & Khoso, 2020; Malik, Mustafa, Anwar, & Iqba, 2020). Moreover another study suggest that there is significant impact of personal loans in increasing in clients income said by (Azam, Danish, & Akbar, 2012). Financial liberation theory suggests by several researcher and argued by other researcher but it shows the relationship between funding support economic development in researcher's country scenario. The nature of business also impact the generation of business as rural women works on handicraft, small shops in their houses, farming, livestock farming, dairy farming, and somewhat agriculture production as well (Amila, et al., 2016) and in urban areas small beauty salon, laundry shops, small food stalls, and small enterprises as well suggest by several

researchers after getting loans from banks they utilize loans in effective and efficient manner (Ahmed & Khoso, 2020). Another study suggest that there is significant impact of bank loans and with size of loans on women clients level of consumptions and increase income as well, which indicated that after getting small loans borrowers utilize in appropriate manner that leads them in wellbeing and prosperity said by (Khan T. A., Khan, Violinda, Aasir, & Jian, 2020). Moreover Other researcher support that there is significant impact of bank loan on agricultural production and agri related business but argued that small size of loan on same sector had smaller impact so needs more funds in same sector said by (Amila, et al., 2016). Moreover, according to Hapsari (2018) researcher suggest that loan size don't impact loan but loan has impact on other variables. Whereas, other researcher suggest based on their study there is significant impact of bank loan on agriculture output (Florence & Nathan, 2020) therefore researcher come on conclusion that Financial liberation leads economic prosperity of clients. Mahmood, Arby, Hussain, & Sattar (2016) researcher suggest that there is impact of microcridet on income generation and improving living standard in punjab. Moreover, other study also support that effect of laon on agriculture production, agri output, livestock, and improtant farming equipment said by (Khan, Jan, Rehman, Mehmood, & Ali, 2007).

### Research Methodology

This paper is quantitative and casual in nature, researcher collect mainly data 1<sup>st</sup> from commercial banks and 2<sup>nd</sup> microfinance banks form 10 different cities such as Hyderabad, Larkana, Sukkur, Multan, Rahim Yar Khan, Bahawalpur, Lakki Marwat, Mardan, Turbat and Ziarat cities of Pakistan. Target population is almost 13.71 million from both sector according to economic survey 2019-20 and also mention by (ACCA, March 2018; Ahmed & Basharat, 2015). Researcher use primary data to analyzed the responses for this use most common tool questionnaire with 5 point Likert scale some other researcher also used the same (Shaheen, Hussain, & Mujtaba, 2018; Tariq, Aleemi, & Iqbal, 2015) and equal stratified sampling technique selecting 100 from each city for both different types of bank so total sample is 1000 respondent out this selected sample 900 respondents were response were selected because some clients are unable to understand and left incomplete data so, fully fill responses are selected for further process. Researcher use MS spread sheet and Smart-pls 3.3.2 for PLS-SEM analysis, first check reliability, validity and collinearity, then model significance with R square and boot strapping of model to check the effect of independent variable on dependent variable and relationship with moderation. Researcher used Bank loans as independent variable, income level of Consumers as a dependent variable and used two moderators Loans size and Nature of Business.

### Research Hypothesis

Ho1: There is no effect of bank loans on income level of consumers.

Ha1: There is effect of bank loans on income level of consumers.

Ho2: There is no effect of bank loans on income level of consumers with moderator's effect loan size.

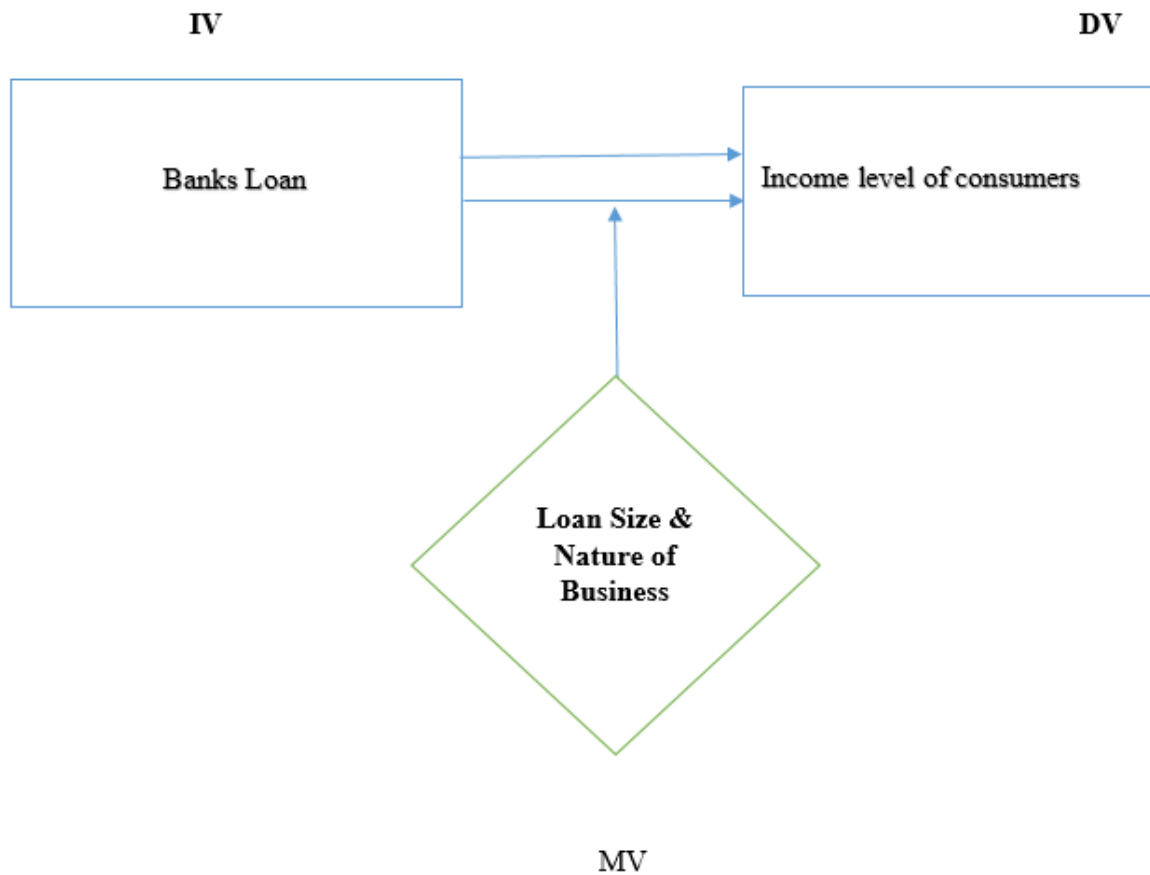
Ha2: There is effect of bank loans on income level of consumers with moderator's effect loan size.

Ho3: There is no effect of bank loans on income level of consumers with moderator's effect Nature of business.

Ha3: There is effect of bank loans on income level of consumers with moderator's effect Nature of business.

### Conceptual frame work

Researchers were worked to achieve the objective of the study so establish this frame work for this study.



Discussion of result

Researcher want to check first some reliability and validity measure in initiation of data processing

Table 1 “Construct Reliability and Validity”

“Construct Reliability and Validity”				
	“Cronbach's Alpha”	“rho_A”	“Composite Reliability”	“Average Variance Extracted (AVE)”
Bank Loan	0.857	0.865	0.897	0.636
Loan Size	1.000	1.000	1.000	1.000
Moderating Effect 1	1.000	1.000	1.000	1.000
Moderating Effect 2	1.000	1.000	1.000	1.000
Nature of Business	1.000	1.000	1.000	1.000
Income Level	0.872	0.874	0.907	0.663

All criteria of reliability given by (Hair, Risher, Sarstedt, & Ringle, 2019; Gliem & Gliem, 2003) above 0.7 are acceptable here researcher result are above 0.85 hence there is no issue of reliability, and AVE must be above 0.5 as said by (Hair, Risher, Sarstedt, & Ringle, 2019) again mention given table 1 shows that there all values in AVE column are above 0.5 so no validity issue.

Table 2“Fornell-Larcker Criterion”

“Fornell-Larcker Criterion”						
	Bank Loan	Loan Size	Moderating Effect 1	Moderating Effect 2	Nature of Business	Income Level
Bank Loan	0.797					
Loan Size	0.043	1.000				
Moderating Effect 1	0.221	0.046	1.000			
Moderating Effect 2	0.633	0.058	0.102	1.000		
Nature of Business	0.671	0.108	0.102	0.610	1.000	
Income Level	0.785	0.165	0.026	0.706	0.807	0.814

Above table shows Fornell-larcker criteria is it other way to measure validity and all non- diagonal value must be less than diagonal values hence all vales are in recommended range as suggested by (Fornell & Larcker, 1981).

Table 3 shows “Heterotrait-Monotrait Ratio (HTMT)”

	Bank Loan	Loan Size	Moderating Effect 1	Moderating Effect 2	Nature of Business	Income Level
Bank Loan						
Loan Size	0.081					
Moderating Effect 1	0.233	0.046				
Moderating Effect 2	0.675	0.058	0.102			
Nature of Business	0.71	0.108	0.102	0.61		
Income Level	0.815	0.174	0.102	0.754	0.823	

Above table shows HTMT and recommended values of HTMT is must be less than 0.85 suggested by (Hair, Risher, Sarstedt, & Ringle, 2019) and here all values in table 3 are less than 0.85 so are acceptable range and again there is no issue so validity.

Table 4“Collinearity Statistics (VIF)”

“Collinearity Statistics (VIF)”	
“Outer VIF Values”	
	VIF
Bank Loan * Loan Size	1
Bank Loan * Nature of Business	1
B1	2.026
B2	2.029
B3	2.522
B4	2.318
B5	1.992
I1	2.365
I2	1.751
I3	1.986
I4	1.631
I5	2.051
Nature of Business	1
Loan Size	1

Above table shows “Collinearity Statistics (VIF)” is shows there is collinearity between variables or not and the suggested value of VIF must be less than 3 by (Hair, Risher, Sarstedt, & Ringle, 2019) and researcher above table shows all variables values are not greater than 3,hence there no problem of collinearity in data.

Table 5“Model Fit”

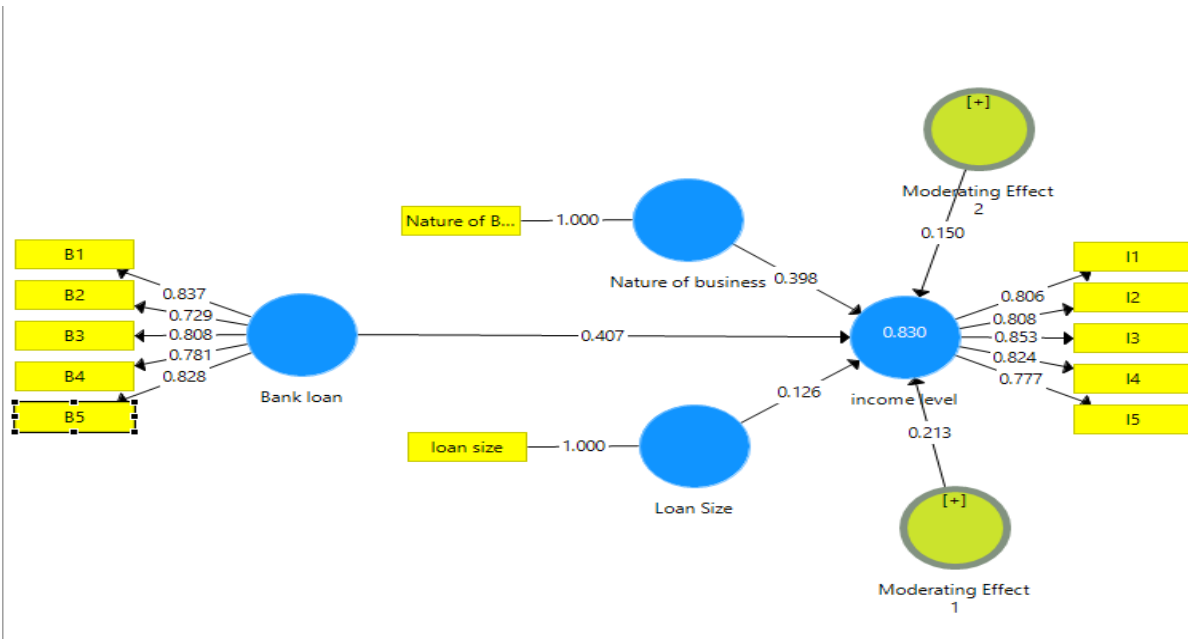
“Model Fit” “Fit Summary”		
	“Saturated Model”	“Estimated Model”
SRMR	0.075	0.721
d_ ULS	0.437	0.4
d_ G	0.261	0.266
Chi-Square	126.856	119.805
NFI	0.815	0.825

So researcher proceeded further to check model Fitness after checking all criterions of reliabilities and validities measures so above table shows model fit summary and suggested value of SRMR is less than 0.08 are acceptable(Hair, Risher, Sarstedt, & Ringle, 2019) and above table shows the value 0.075 so model has not fitness issue.

Table 6“R Square”

R Square		
	“R Square”	“R Square Adjusted”
Income Level	0.830	0.821

Model Picture with R square value

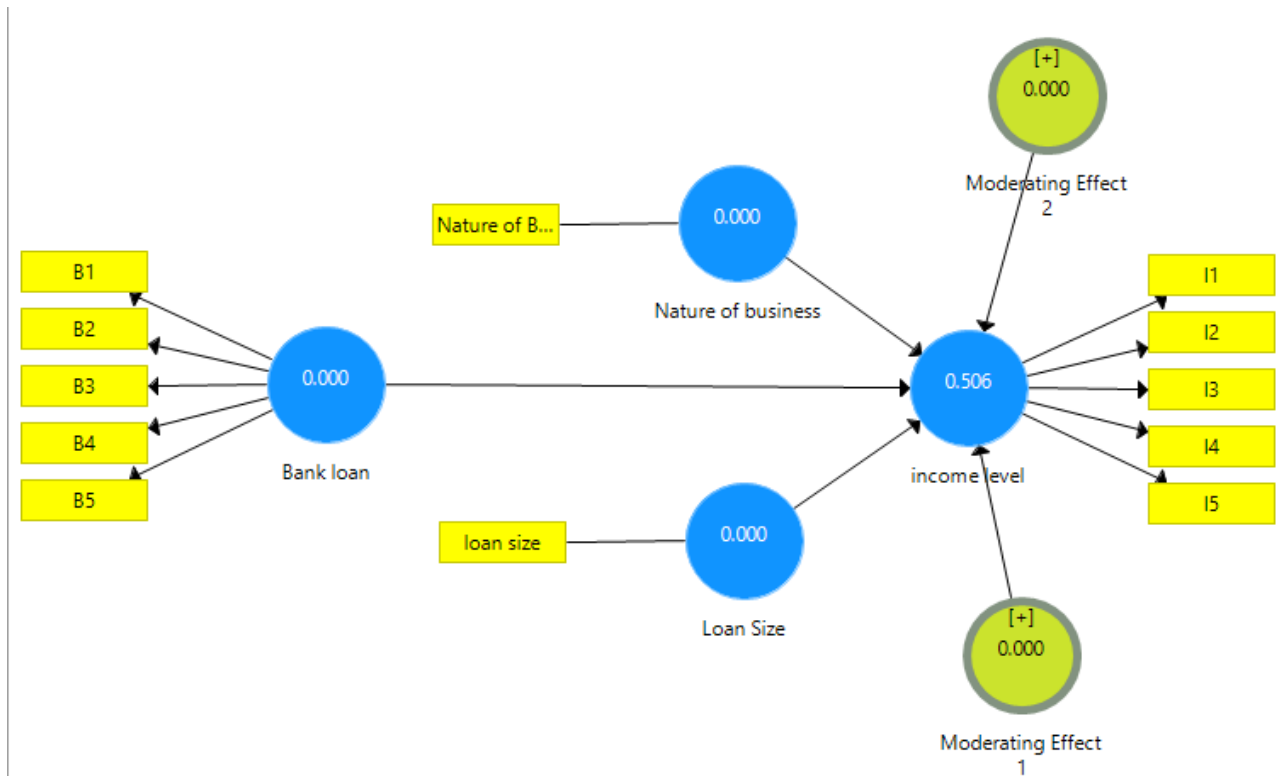




Above given table 6 and Model picture shows R square value is above 0.8 it indicates that IV and DV relationship is above 80% means explain variance is above 0.8 have strong impact of bank loans on level of income of consumer as suggested by(Hair, Risher, Sarstedt, & Ringle, 2019)R<sup>2</sup> values of 0.75, 0.50 and 0.25 are considered substantial, moderate so researcher R<sup>2</sup> value is in moderate range.

Table 8“Construct Cross Validated Redundancy”

“Construct Cross validated Redundancy”			
Total	SSO	SSE	Q <sup>2</sup> (=1- SSE/SSO)
Bank Loan	4651.00	4651.00	
Loan Size	900.00	900.00	
Moderating Effect 1	900.00	900.00	
Moderating Effect 2	900.00	900.00	
Nature of Business	900.00	900.00	
Income Level	4651.00	2298.76	0.506



Above table and picture shows predictive relevance of the model with Q<sup>2</sup> value and it is recommended by (Hair, Risher, Sarstedt, & Ringle, 2019) that if Q<sup>2</sup>Values greater than 0, 0.25

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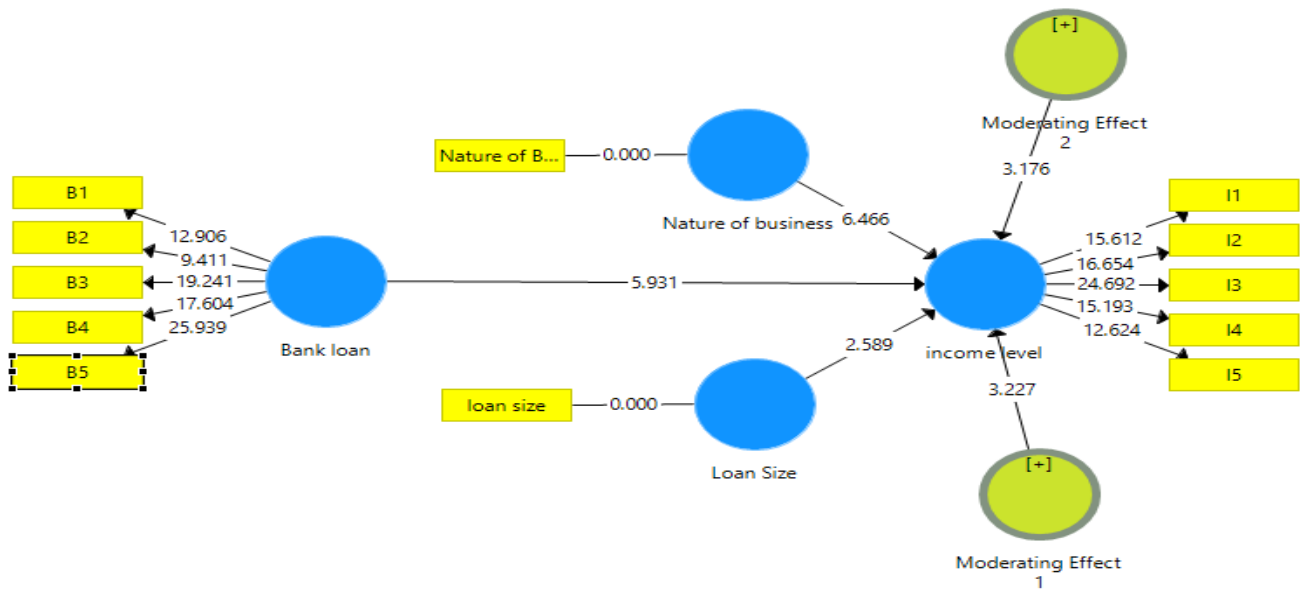
and 0.5 weak, moderate, and strong predictive relevance of model here in above table researchers  $Q^2$  value is 0.506 and that means this study's model has positive predictive relevance.

After discussion of result of measurement model researcher further discuss structural model for this here in given table and Picture of model shows that “Mean, STDEV, T-Values, P-Values” and recommended values as T value not less than 2, P values must be less than 0.05 suggested by (Hair, Risher, Sarstedt, & Ringle, 2019).

Table 8 “Bootstrapping”

	“Mean, STDEV, T-Values, P-Values”				
	“Original Sample (O)”	“Sample Mean (M)”	“Standard Deviation (STDEV)”	“T Statistics ( O/STDEV )”	“P Values”
Bank loans -> Income level	0.392	0.418	0.066	5.939	0.000
Loans Size -> Income Level	0.124	0.122	0.048	2.589	0.009
Moderating Effect 1 -> Income Level	0.206	0.211	0.064	3.227	0.001
Moderating Effect 2 -> Income Level	0.158	0.156	0.050	3.176	0.003
Nature of Business -> Income Level	0.401	0.387	0.062	6.466	0.000

Model picture with Path values



So all values in given above table 8 shows all path are positive and IV and DV relationship is significant, it means Bank loans has impacting consumer income level, moreover with moderator of loan size has also impacting income level. Furthermore, the 2<sup>nd</sup> moderator nature of business is also impacting on income level.

### Conclusion

Researcher in the end conclude that all 10 different cities such as Hyderabad, Larkana, Sukkur, Multan, Rahim Yar Khan, Bahawalpur, Lakki Marwat, Mardan, Turbat and Ziarat cities of Pakistan from both types of bank based on respondents' responses after analysis all null hypotheses are rejected and all alternative hypotheses are accepted it means that there is significant impact of bank loans on level of income with both moderators' size of loans and nature of business. As mention in literature (Amila, et al., 2016) that loan size has impact the income of clients of banks if large size of loans receives by borrowers, so they can invest in agriculture in purchasing of seed and fertilizers too. Moreover, clients' response that they increase their income, increase their wealth, enhance level of education of their children, increase level of consumption of better food quality, increase business income, slow down their business expenses after high earnings, agriculture production also increases, fish pounds are developed and increase pounds' capacity as well, increase their livestock and female borrowers said that they increase their small business capacity, increase purchasing raw material of handicraft and material related to beauty salon so they produce more handicraft, give more services to their clients and sell more as well. researcher results are alien with other researcher as well (Khan A. A., et al., 2020; Mohsin, Bashir, & Tariq, 2018; Malik, Mustafa, Anwar, & Iqba, 2020). So banking and financial sector are supporting to economy of our country it means funds flow leads economic development.

### Future research area

Other researcher may use other moderating variable some demographic factors age, gender, education, areas, and marital status and non- demographics factors such as number of borrowed loan, Covid-19 impact, Inflations, cost of borrowing etc...

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