

## Measurement of Formal and Informal Sources of Agricultural Credits in China

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Received: October 6, 2018  
Accepted: December 27, 2018

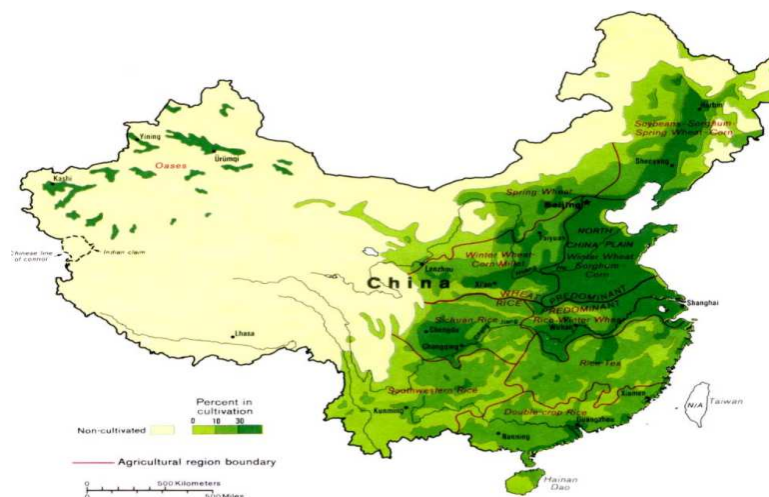
### ABSTRACT

Although China is a developing country whereas, growing first to stele-down the stable economy in the world. Agriculture sector in China is considered the key growth sector whilst consistently improving the livelihood of rural population. A credit is an important factor which increases the production and income of the farmers. Agriculture credit plays an important role to boost up the agriculture share in grass domestic Products (GDPs). The shortage of credit availability or restriction of capital which challenged by the farmers is one of the major problems in the adoption of modern technologies and efficiency improvement in the agriculture sector. This study examined polices exhibitions, sources, and significance of agriculture credit in China. Time series data were used for the study that was collected from various national and international data sources.

**KEYWORDS:** Agricultural credit, agriculture sector, sources, policies, & performance of credit, China

### 1.1. INTRODUCTION

Agriculture sector has a significant role in the economy of China and it is the important foundation of food, employment and income. China is practicably outstanding producing country that has improved agriculture sector. Recently, increasing production costs Chinese prices support and subsidies also increase (Liu et al., 2009). China's agriculture sector is a champion among a fundamental region of the world. In China 300 million peoples are associated with agriculture sector and give more than 12% of total gross domestic product (GDP). Agriculture sector provide wheat, rice, potatoes, groundnuts, millet, cotton and various belongings are producing in the agriculture sector of China. Although the way that addressing to only 10% of the arable land far and wide, it produces food for 20%of the world's population (Esarey et al., 2000).



In 4,000 years, China has been an agricultural country. When the people's republic of China was built up in-1949, basically all arable land was under development; water system and flood systems built hundreds of years faster and concentrated cultivating improves as of now delivered moderately significant returns. However, the nominal key virgin land was accessible to help populace development and economic

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improvement. Nonetheless, after a decrease underway because of the Great Leap Forward (1958– 60), agricultural changes symbolized in the 1980s expanded revenues and guaranteed significantly more noteworthy future generation from existing developed land (NSBC, 2009).

Agriculture sector play a significant part in regard to generating chances of work, enhancing way of life, reducing poverty and achieving modicum of food (Rahman & Parvin, 2009). The achievement has accomplished because of consistent change of agricultural approaches and its usage lately. The national agriculture extension policy; national seed policy; irrigation and water management policy; integrated pest management policy; and agricultural rural credit policy. Out of these approach mediations, the rural/country credit has been viewed as one of the pivotal variables toward manageable improvement of farming section especially to rise agricultural generation (Mahmud, 2008 & GOB, 2009). China has a population of 1.3 billion, of which 57.01% are living in the rural area. A large portion of the rural population depends on farming. In 1979 the "household responsibility system" introduced another period for China's agribusiness and the whole economy, demonstrating the beginning of economic changes, enabling the individual families to "possess" the land for a long time which has now been reached out to an additional 30 years and more. The family units can settle on their own choice to deliver and manage the overflow. The "household responsibility system" the first stage of reform employed 1979 over 1984 during that period performance increased motivations and encouraging production efficiency that effectively increased the agricultural output by 45% (Zhang & Xin, 2013). Credit demand increased in the couple manufacture and communication necessary of rural household in the fast-growing economy. This has brought about expanded collaborations between the family units and financial foundations (Rahman et al., 2011).

China is country that has big agriculture sector and enormous population. Clearly, in national economy agriculture has a great importance (Chen et al., 2012). The share of agriculture sector in gross domestic production (GDP) was 28.1% with 70.5% of the total national employed in 1978. In 2006 its contribution in GDP was 11.8 % with 42.6% employed labor (China Statistical Abstract, 2013). The growth of national economy has been promoted by farmers and rural areas. It is evaluated that each 100 billion Yuan of definite utilization made by the Chinese ranchers would produce in excess of 230 billion Yuan of shopper request in national economy, prompting more than 120 billion Yuan of extended middle of the road contribution from the mechanical division (OECD, 2006).

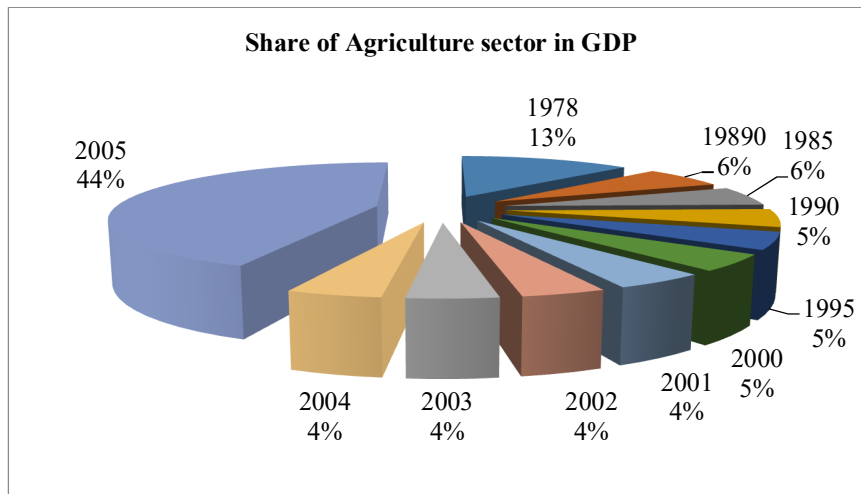
The GNP would rise at 0.5% in order to increasing incomes of farmers at every solitary % point. Recently, agriculture sector become progressively noticeable and play significant role in various segment of economy assuming an undeniably vital part in guaranteeing successful supply of farm produce and its quality and wellbeing, balancing out costs, ensuring eco-condition, and acknowledging practical improvement. Its contribution is 4.1 % in imports and 3.2% in exports to the national total, respectively (MOA, 2010). The role of Agriculture in national economy in 1983 to 2012, percent year share of agriculture in GDP, share of agriculture in employment, rural consumption in retail, Agriculture in revenue, agriculture in Government expenditure, agriculture in bank loans, agriculture in import, agriculture in export, agriculture's shares in national economy are presented in **Table 1**.

**Table 1: Role of Agriculture sector in National Economy from 1983 to 2012**

1983-2012	% Share in GDP	% Share in Employment	% Share in Rural Consumption	% Share in Revenue	% Share in Government Expenditure	% Share in Bank Loans	% Share in Imports	% Share in Exports
1983	33.9	67.1	51.4	4.2	0.0	0.0	26.6	22.3
1984	33.1	64.2	52.5	3.7	0.0	0.0	18.5	22.6
1985	29.8	62.4	53.0	2.1	8.3	0.0	12.1	24.5
1986	28.5	41.5	52.1	2.1	7.9	0.0	12.0	24.5
1987	28.3	60.0	51.7	2.4	8.0	0.0	14.8	22.0
1988	27.2	59.5	50.8	3.1	7.9	0.0	16.8	22.0
1989	26.4	60.1	50.0	3.1	9.4	0.0	17.1	20.5
1991	26.2	60.0	47.0	2.9	10.3	6.7	13.7	15.8
1992	23.6	58.6	45.5	3.4	10.1	6.7	12.0	14.5
1993	21.5	56.0	44.6	2.9	9.5	6.5	8.1	13.7
1994	21.6	53.3	43.9	4.4	9.2	4.9	10.8	12.9
1995	20.8	52.2	43.2	4.5	8.4	3.1	9.3	9.4
1996	20.4	50.5	43.2	5.0	8.8	3.1	7.1	8.4
1997	18.3	49.9	43.4	4.6	8.3	4.4	7.0	8.2
1998	18.0	49.8	38.9	4.0	10.7	5.1	7.0	7.5
1999	17.6	50.1	38.7	3.7	8.2	5.1	5.0	6.9
2000	16.4	50.0	38.2	3.5	7.8	4.9	5.0	6.3
2001	15.8	50.0	37.4	2.9	7.7	5.1	4.9	6.0
2002	15.3	50.0	36.7	3.8	7.2	5.2	4.2	5.6
2003	14.6	49.1	35.0	4.0	7.1	5.3	4.6	4.9
2004	15.2	46.9	34.1	3.4	7.5	5.5	5.0	3.9
2005	12.5	44.7	32.8	3.0	7.2	5.9	4.3	3.6
2006	11.8	42.6	32.5	3.1	6.5	5.9	4.0	3.2
2007	10.8	40.8	32.3	3.2	6.8	5.9	4.3	3.0
2008	10.7	39.6	30.3	3.1	7.2	5.9	5.1	2.8
2009	10.3	38.1	32.8	4.1	8.7	5.8	5.2	3.3
2010	10.1	36.7	31.9	4.1	9.0	5.4	5.2	3.1
2011	10.0	34.8	31.8	3.8	9.1	5.4	5.4	3.2
2012	10.1	33.6	31.9	3.8	9.6	5.7	6.1	3.0
Annual growth rate (%)	-4.4	-1.9	-2.1	0.8	-0.5	0.3	-5.1	-8.3

**Source:** 1983-2011 Data collect from China Agricultural Development Report (MOA various years), data of 2012 gather from China Statistical Abstract (2013) and data of agriculture loans derive from China Financial Institution Loans Report of 2012(The People’s Bank of China, 2013).

The capacities of family units can fundamentally increment by access of credit through this they meet their money-related requirements for farming information sources and profitable ventures. Access to credit could likewise increase rural poor households’ willingness to embrace new innovations that raise both mean levels and riskiness of income (Fu Hong, 2009). At long last, access to credit permits rural households units to smooth their utilization on account of an adverse event. The significance of rural credit in the provincial economy is likewise very much bolstered by exact proof. One extra Yuan of credit would yield 0.235 Yuan of the extra gross estimation of yield in China (Ahluwalia, 2002). A positive connection between credit access and family units' welfare, 27% loss of agrarian yield is related to credit imperatives in country (Barham et al., 1996). Share of agriculture sector in GDP from 1978 to 2005 is presented in **Figure 1**.



**Figure 1:** Share of Agriculture Sector in GDP  
**Source:** Ministry of Agriculture Planning Bureau 2010

## 1.2. CONCEPTUAL FRAMEWORK

Over past five decade, agriculture productivity growth has become a compulsory and a necessary ailment of development. According the properties of growth framework input factors like land, labor and capital cannot explain the output of total factor productivity (TFP). The productivity and growth of agriculture are not same in the world economy. Profitability development is necessary to take care of the food demand of an increasing population and economic growth. TFP is a more straightforward idea than that of innovative changing. Particular development has two segments: specific change and change in specific development (Solow, 1957).

At the time of post reform (1888-1991) technical productivity of industry, agriculture and rural industry sector has been 50 -60 %. Particular development equally appears by using the factors e.g. human capital, innovation, R&D, education level and training on the job. This has vital consequences on the procedure which should be included for raising the TFP. Comparatively, sectoral growth efficiency is a vital determinant of economic growth (Kuznets, 1986) and horticultural (Evenson & Jha, 1973). Provincial credit bolsters the rural poor economy from numerous points of view. Access to agricultural credit can confidently increase the capacity of family units with no or lacking assets to meet their budgetary necessities for agricultural contributions and profitable projects. Access to credit could likewise increase provincial poor family unit's eagerness to hold new technologies that increase both mean levels and diffidence of income (Rosenzweig and Binswanger 1993; Carter 1984).

## 1.3. LITERATURE REVIEW

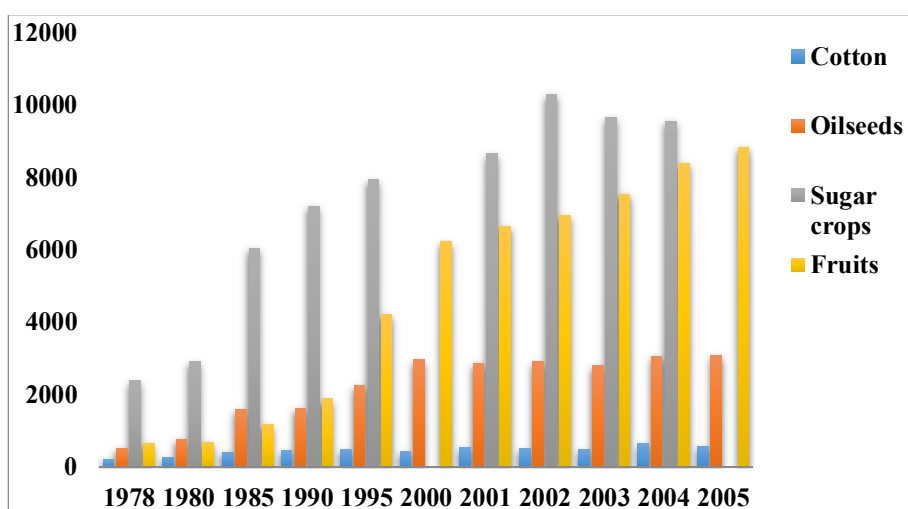
China has been commercializing its banks over the previous decade, however the role of financial foundations in rural policy till in processing (Huang & Rozelle, 2006). To achieve improvement for the system, product securing and threatening to desperation estimates China has made separate procedure banks. Nevertheless, proceeding decisions made by state-claimed business banks and credit cooperatives are as yet guided by approaches of the legislature and Communist Party (Barham et al., 1996). Chinese policymakers hold a view ordinary in creating nations that provincial poverty can be clarified by an implantation of battered credit and they are they are trying to the outstanding overflow of benefits from provincial investors to urban borrowers (Feng et al., 2014).Credits to remodel foundation advances to redesign foundation and recover base perceive are in addition seen as a technique for boosting grain age, another important condition for China's policymakers. The flood in cultivating crediting is one of the different methodologies practices expected to help provincial wages starting late QiuHong (2018).

Technological change is basic instrument of agriculture growth. Over early time period the largest share of crop production growth contributed by technological change Huang and Rozelle (1996), Fan (1997), Fan and Pardey (1997), Huang et al., (1999). China is one of the leading countries on the world in

which agricultural GDP is growing by increasing the agricultural R&D consumptions. During the period of 1990& 2005 there has a great increase in research and developing (R&D) (Jin et al. 2002). In many countries access of credit supply positively affect the income of farmers and growth of agricultural output. In Bangladesh 80% of small and marginal farmers do not receive agricultural credit from formal sector. The farmers collect credit to fulfill expenditures, education and the aggregate agricultural production function from informal sectors (Ahmad et al., 1982). In India Deterioration of development in agricultural yield has stayed of dynamic enthusiasm to scientists and policymakers since long. Different endeavors have been made to clarify the development in horticultural yield as far as territory and yield segments, starting with the main precise investigation by (Minhas & Vaidyanathan, 1965).

#### 1.4. Methodological Consideration

It is clear from past examinations that credit assumes an essential part of increasing rural profitability. Appropriate and open access to credit contributes to agriculturists (checking unconventional farmers) to purchase the required material foundations and equipment for doing farm activities and increase inputs (Abedullah (2009), Saboor et al., (2009)). There is positive and significant relationship between financial spending for agriculture and agricultural growth. The ranging output elasticity in 1995 to 2006 is 0.27 and 0.32 (Li, 2009). The causality relationship, and credited around 4% of agrarian GDP development to consumption in supporting farming and 5% to agricultural venture, with a period slack of 4 years (Yang, 2012). The long and short run association between agricultural expenditure and agricultural GDP is examined and found that the impact of agricultural spending on agricultural GDP is examined and found that the effect of rural spending on rural GDP topped in 6 years after the shock in short run (Wang, 2013). ). Production of Major Cash Crops in China, Unit: 10 thousand tons are shown in **Figure. 2.**



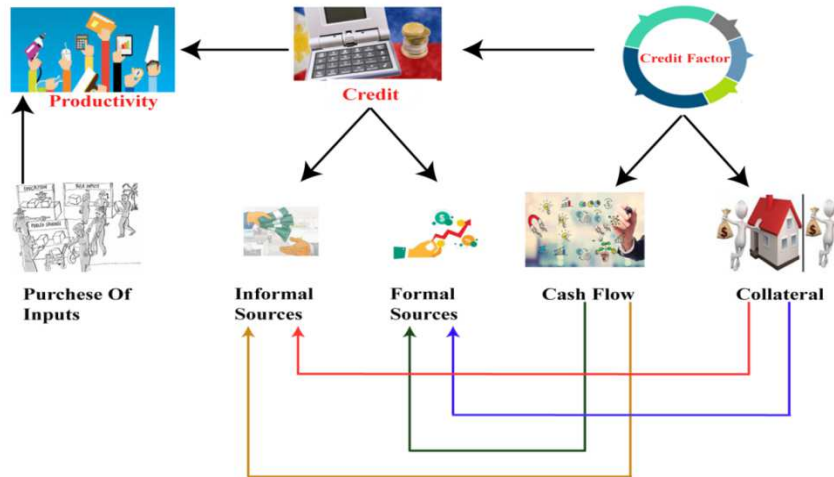
**Figure 2:** Production of Major Cash Crops in China, Unit: 10 thousand tons

### 1.5. RESULTS AND DISCUSSION

#### 1.5.1. Sources of Credit for Agriculture in China

In this section, we have providing the types of agricultural credit in China, institutional and non-institutional sources of credits to the agriculturists. The foundation of People's Republic of China in 1949, they designed and accomplished different agricultural methodologies and frameworks for achieving different purposes, for example, national food security, industrialization/urbanization, and general economic growth. China displayed land deviations in the mid-1950s, similarly began to use improved seeds and fertilizers in the late 1960s and place strongly in water framework in the 1970s. China started to change its ordinarily organized green region in the late 1970s by decentralizing its creation units from social affair to specific families and by empowering change of business areas to advertise provincial age. In 1993,

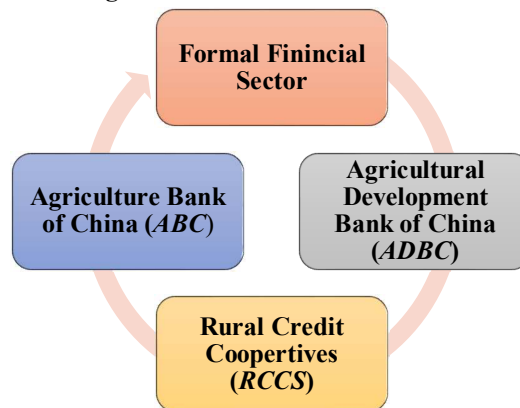
Chines agriculture had transformed into an inconceivable degree promote driven financial part both production and productivity developed at a noteworthy pace. China interference in agricultural through information and yield endowments and confinements on the local and universal exchange. There are two main source of credit of agriculture sector the one is formal and second is informal sectors. Factors of credits have been shown in **Figure 3**.



**Figure 3:** Factors of Credits

### 1.5.2. Formal Financial Sector

The general population's bank of china (PBOC) was set up in December 1948. For a long time, it worked at three principles: business bank, government treasury and manager of money related framework. Until the fact that in 1978 it also increased short run investment loans to state possessed activities to fulfill the consistently set credit standard (Cousin, 2006). Primary sources of agricultural credit are National, private and commercial banks. These banks are giving the short-term credit to promoting the local agricultural system and additionally these foundations are very much interesting to invest in charge and import advertising activities. In all cases, it will be dynamic that banks consider farming advertising financing a beneficial movement (IFPRI, 2013). Agricultural bank of China (ABC), agricultural development bank of China (ADBC), rural credit cooperatives (RCCS) are main component of formal financial credit which are shown in **Figure 4**.



**Figure 4:** Component of Formal Financial Credit

#### 1.5.2.1. Agricultural Bank of China (ABC)

Agricultural bank of china (ABC) is china's four state owned commercial bank it was made to wide-ranging rural policy in the late 1970s. Agricultural initiatives credit come from ABC. The ABC provides

loans not only to rural households but also to agricultural initiatives, rural cooperatives and town associations.

#### **1.5.2.2. Agricultural Development Bank of China (ADBC)**

ADBC bank offer loans and buttressed to commodity procurement, ADBC bank established in 1994 when ABC bank failed to fulfill its tasks and policies. The main objective of ADBC is to provide loans to public sector initiatives for earning and storing of grain, cotton, and eatable oils. The ADBC provide loans to the agricultural sector and rural organization and also play an important role in shrinking as the government privatizes agricultural goods advertising.

#### **1.5.2.3. Rural Credit Cooperatives (RCCS)**

Most formal loans to farm households are made by more than 30,000 rural credit cooperatives (RCCs). RCCs allow deposits from nearby occupants and make loans to households, organizations, and different entities. RCCs were set up in agricultural cooperatives in the late 1950s by requiring every farmer to make small money commitment. After aggregate agriculture was disbanded in the 1980s, RCCs proceeded as the rural arm of the state banking system with an RCC serving each of China's 40,000 townships. Changes in 2003 and 2004 put them under provincial governments and merged them into the county- or provincial-level RCC associations. RCCs can just work in their home township or region. A portion of the more grounded RCCs are being rebuilt as common rural commercial banks or cooperative banks, and some of those have recently attracted foreign investors. RCCs are cooperatives in name as it were. Their ownership is unclear and members do not necessarily have any say in management.

#### **1.5.3. Farm Credit China**

This would be a national oversight founding, a parasternal association with the sole explanation for recommending policy, organizing the farm credit framework, provide administrative guidance, and managing the organization of banks. Huge numbers of these activities are starting now housed inside the CBRC, so there might be potential to use cooperative energies by setting this element inside the CBRC.

#### **1.5.4. China Farm Credit Mortgage Corporation**

This entity would establish a bond market to increase access to long-term credit for agricultural and food businesses and ultimately to raise the capital for transactions in land and forestry user rights, should such transactions be permitted in the future.

#### **1.5.5. Federation of Rural Credit Cooperatives (FRCC)**

The territorial RCCF would be a form involved the official individuals from at least two ordinary RCCUs. The reason for the RCCF is assemble data, spread effort, and direct arrangement for a multi-commonplace farming area. In some sense, this structure is practically equivalent to the US Federal Reserve arrangement of locally based branches. The eventual outcomes of this fragment give an overview of the usage of the cultivating part, encapsulation and horticultural crediting and their impact on the country.

#### **1.5.6 Individual Savings and Informal Borrowing**

In rustic China, many farmers have utilized their own reserve funds for speculation and buying contributions of the agrarian area. Generally provincial agriculturists got credit from casual sources like companions, family, and private loan specialists, clubs of speculation stores. Informal loaning isn't legitimate yet it is generally endured in many areas.

### **1.6. Current Situation of Agriculture Credit in China**

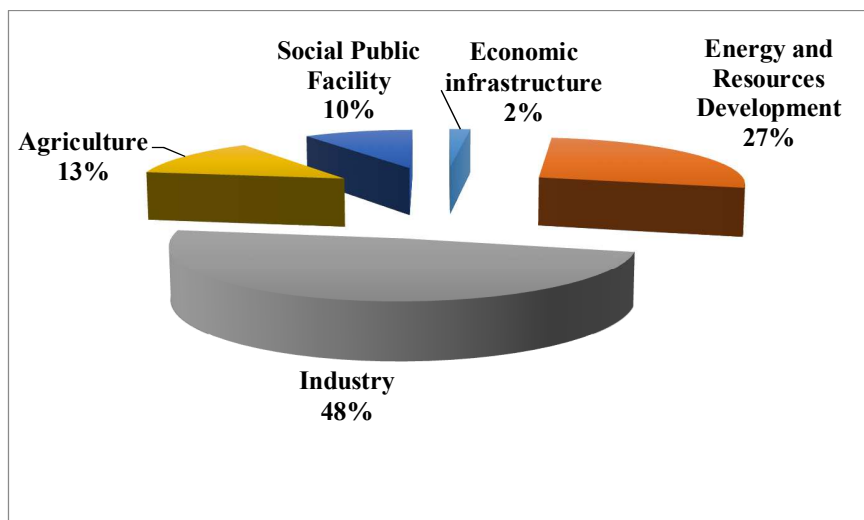
Credit for "farming industrialization" has record straight impact on the horticulture segment. According to this platform farmers can easily access to loans for agricultural projects like mechanical modification. In 2002 ABC enhanced their loaning packages to agrarian progress and in 2003 ABC loaned 40 billion Yuan (\$4.8 billion). Moreover china development bank (CDB) started loaning package went for fortifying China's biggest provincial compound association. In 2004 ABCD started agri-business progress loaning system. The CDB and ADBC have practical experience in program loaning. It is huge change of \$83.3 billion in extraordinary credits by ADBC yet adjust incorporates further than \$35 billion in useless credit from prior centuries. New credits of \$11.7 billion to sponsored gaining of 90 million a lot of grain and 600,000 tons of fats and oils by state advertising undertakings and it made advances for grain stockpiling totaling \$5.6 billion (China Financial Study Association) made by ADBC in 2003. Furthermore, in the

cotton obtainment ADBC credits act an imperative aspect. The CDB loans fundamentally to extensive nonagricultural organization schemes.

China is presently executing the “New countryside” arrangement. It is broadly trusted that additional than 20 tons Yuan of assets will be required by the time of 2020 in China in this procedure According to late insights, just 10.9% of finance is utilized as a part of the rural area in China, which implies the greater part of agriculturists don't approach or don't obtain in formal credit showcase and could just get in their informal communities, for example, companions and relations. In china a large number of households meet their credit necessities relay on casual credit. Rural zones 50% of the credits generates by non-institutional sources. One of the 240 million provincial people, just 15% come to be credit from formal credit markets. Share of non-institutional credits be located among 33% and 66% of every few examination zones.

### 1.6. SHARE OF GOVERNMENT

Governments have basic part to performance in agricultural promotion and economic policy. The government must assume the liability of moving the activity of casual companies to official organizations with the goal that they will attitude the shot of equivalent position and economic maintenance. Since the late 1990s, the government has found a way to change and market its banking system, yet it was not until the point when 2003 that it started a noteworthy change of rural credit cooperatives. The ABC, similar to China's other state-possessed banks, is being changed into a benefit looking for business save money with a definitive objective of being recorded on stock exchanges. The creation in 2003 of a bank controller, the China Bank Regulatory Commission (CBRC), was an essential change in the financial sector. In recent years, RCCs in a few regions have been merged as the country business or agreeable banks and most different RCCs have been converted into area or common level associations. They have been given more scope to offer higher financing costs on stores (to rival post workplaces and banks) and modify loan costs on credits inside a band around rates set by the Peoples Bank of China. Credit revealing administrations have recently started working, yet an evaluation of advanced applications is risky because of adulteration or nonattendance of financial records (numerous exchanges are still led in real money), newness to hazard investigation, and inert cronyism. Distribution of loans by sectors in china until the end of 2009 is presents in **Figure 5**.



**Figure 5:** Distribution of Loans in China

As indicated by the two White Papers, agriculture has dependably been an objective of Chinese participation. Until 2009, China implemented 221 projects concentrated on agribusiness in creating nations: 35 farms, 47 focuses of experimentation and development of agricultural innovation, 11 livestock projects, 15 fishery projects, 47 water system projects, and 66 other unspecified agricultural projects and additionally the supply of homestead hardware. In the vicinity of 2010 and 2012, China created 49 new



tasks in horticulture: 25 farming show focuses, 21 water system activities, and 2 ventures in light of the change of rural items (Gale Fred.2013).

### **1.7. DEMAND OF AGRICULTURAL CREDIT IN CHINA**

The increase in agricultural loans amid this period was far bigger than the increase in consumptions on agriculture. Horticultural advances issued shot up from \$53 billion out of 2001 to \$99 billion of every 2003. The expansion in agricultural loans suggests that the sum credited to ranchers every year expanded \$46 billion in the vicinity of 2001 and 2003, yet the consumptions on agribusiness (input costs and settled resource ventures consolidated) ascended by just \$5.5 billion. The vast difference between these numbers proposes that next to no of the new loaning really bolstered agricultural production.

### **1.8. CONCLUSION AND POLICY RECOMMENDATION**

The agricultural credit plays an important role while making farming sector more productive and efficient China. The purpose of this study was to assess polices, type of different sources and the outcome of performances that can enhance the agricultural credits. The study based on was used secondary data which is obtained from counting sources for citing condition (CNKI) documents and other various different internet sources. In China, rural credit incorporates consist incorporates consist on institutional and non-institutional sources. The rural financial credit signifies the production of agriculture sector and this relation are generally recognized. The provision of more adequate credit facilities enhanced and ensured timely utilization of agricultural inputs, new technologies adoption and provide an opportunity of technical skill enhancement. Because of the rapid growth in agriculture sector, modern technology adoption and increased use of better inputs were the key determinants.

The finance budget that covers the farming expenditures might be compensating through farmers assets or other financial credits. The farmers' community of south Asia such Bhutan, Maldives, Bangladesh, India and Pakistan, they are solely dependable on agricultural financial credit to cover their farming expenditure. Nevertheless, it is recommended to hold a strong association between the institutional credit and agricultural production that may increase disbursement of agricultural credit in small, farmers. In addition, while devising their credit portfolio a careful balance must be maintained between both formal and quasi formal institutions. Suitable government policy gives the guarantee attractive land rights (for security in getting credit) and connecting commercial banks with NGOs while in providing loans to the agriculturists.

### **ACKNOWLEDGEMENT**

The authors are grateful to College of Economics & Management, Anhui Agricultural University Hefei, China for supporting and cooperation.

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