

## Swiss Cooperation Funding for Local Government Management in Benin: Impacts on Family Farming from Maize Production Yield Perspective?

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### Abstract

The aim of this research was to contribute to the literature on the impact of funding (subsidies) on farmers' productivity and hence on local development. To achieve this objective, the data collected concerned sample of 521 maize producers accessing from PASDeR spread over the intervention zone (Borgou, Alibori, Atacora and Donga). Heckman's two-stage estimation method was used to make the estimates. Based on the results obtained, we found that the selection process for financial subsidy beneficiaries is optimal. It was demonstrated that the financial subsidy is significant in justifying maize yield. However, the correlation between the financial subsidy and maize yield is negative, confirming the assertion of Blair, 1984 and Sonne 2010. This is because PASDeR's target group is mainly poor and does not have easy access to conventional financial services to bridge funding gap. Finally, policy recommendations aiming to strong involvement of elected representatives, an in-depth diagnosis of the real and complete needs of farming and the rigorous monitoring of beneficiaries must be addressed.

**Keywords:** Local Finance, Basic Social Services, Local Governments, Financing Mechanisms, Local Development, Least Developed Countries.

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#### ACRONYMS MEANINGS

<b>AD</b>	: Atacora Donga
<b>BA</b>	: Borgou Alibori
<b>CE</b>	: Chef d'Exploitation
<b>CL</b>	: Collectivité Locale
<b>EFP</b>	: Exploitation Familiale Paysanne
<b>EMICoV:</b>	: Enquête Modulaire Intégrée sur les Conditions de Vie des ménages
<b>F CFA</b>	: Franc de la Communauté Financière d'Afrique
<b>FAFiR</b>	: Fonds de Facilitation d'Accès au Financement Agricole
<b>FCDA</b>	: Fonds Communal de Développement Agricole
<b>FNDA</b>	: Fonds National de Développement Agricole
<b>INSAE</b>	: Institut National de la Statistique et de l'Analyse Economique
<b>MAEP</b>	: Ministère de l'Agriculture, de l'Elevage et de la Pêche
<b>NPK</b>	: Nitrogène, Phosphores et Potassium
<b>OSP</b>	: Organisation Socio-Professionnelle
<b>PASDeR</b>	: Programme d'Appui au Secteur du Développement Rural
<b>SFD</b>	: Système Financier Décentralisé
<b>UDP</b>	: Union Départementale des Producteurs

## **1. Introduction**

Agriculture in Benin is characterized by the predominance of small producers, mainly in the northern part of the country. Also, characterized by lack of financing and vulnerability due to climate change, conflicts between farmers and herders and the occurrence of jihadist attacks. Due to such characteristics of Benin agriculture, producers' income and agricultural productivity are low, and their labor force is only partially valorized (Report, UDP/AD, 2021). From considerable financial means during the agricultural season, most producers in the northern communes often rely on family labor and mutual aid.

The current agricultural context is characterized by a desire to professionalize and increase the production. So, accessing farm machinery, high-yield seeds and fertilizers appears to be of paramount importance, while the financial opportunity is limited. Although banks and 'SFDs' (Decentralized Financing System) sometimes support producers by granting loans, it has been revealed that credit is devoted for commercial activities, with higher and non-appropriate interest rates, sometimes unsuitable for agriculture. Also, the fact that these institutions require collateral (mortgages and property rights documents). Formerly, property rights granting credit represents an enormous constraint. Being aware of this major problem, the government has set up the 'Fonds National de Développement Agricole' (FNDA). But despite the institutionalization of these funds, statistics obtained from FNDA in mid-July 2021 orient that only agricultural development 'poles 4 and 7' reach the top list of funding released. This is due to a lack of information, illiteracy among producers and poorly prepared applications. In addition to the formal financial sector, despite the various obstacles to get access to agricultural credit are regretful, donors are making efforts through projects/programs to fill this gap in agricultural financing. For example, developing subsidies and financing for agricultural activities aimed at targeting producers. The 'Programme d'Appui au Secteur du Développement Rural' (PASDeR), a Swiss Cooperation to Benin, supports small size producers through Socio-professional Organizations (OSP) in some Communes aiming to improving their living conditions.

Thus, financial support from Swiss Cooperation has enabled the 'Fonds Communal de Développement Agricole' (FCDA) to be implemented for the benefit of a sample of Family Farming (EFP) in northern zone of Benin from 2014 to 2018. With the advent of COVID19, the 'Fonds de Facilitation d'Accès au Financement Agricole (FAFiR)', as an extension of the FCDA, made it possible to set up the COVID19 credit in 2020 in an attempt to curb impact of the pandemic on EFPs, but also in 2021. Funding availability from Swiss Cooperation has enabled several activities to be implemented in the Communes of the ZIP, the impacts of which deserve to be measured.

In view of all these funds set up within the framework of PASDeR by the medium of Swisscooperation, the effect needs to be quantified by considering the beneficiaries in the intervention Communes. Therefore, it would be useful to study "the effect of PASDeR funding on the performance of beneficiary and maize-producing VETs in the identified communes".

Basically, it is important to understand what impacts PASDeR/

Swiss Cooperation interventions had obtained in terms of financial subsidies for maize-producing beneficiaries on yields improvement.

This main question is subdivided into two specific questions:

- What are the terms and conditions of the financial subsidies set up by Swiss Cooperation?
- What are the improvements in maize yield produced by the beneficiaries of the financial subsidies?

The major aim of this study is to assess the effect of subsidies implemented through PASDeR on maize yields in beneficiary 'VETs'. Specifically, it aims to: (i) determine the criteria used by the Cooperation to grant financial subsidies to program beneficiaries producing maize; and (ii) evaluate the increase in maize yield at the level of VET beneficiaries of the subsidies set up by the Swiss Cooperation/PASDeR.

In order to achieve the above objectives, the following hypotheses are formulated : (i) the criteria used by PASDeR for granting f to beneficiaries are optimal and take into account the context of rural populations, (ii) maize yield increases significantly in VETs which have been granted by the program.

## **2. Review of Theoretical and Empirical Approaches to Local Development Financing**

### **2.1. Theoretical Background**

Neoliberalism had been the main global political project applied to developing economies through the Bretton Woods institutions [1]. Interventions were twofold (direct and indirect). Direct interventions took place within the macroeconomics, legal and sectorial frameworks, while indirect interventions took the form of targeted credit, technical assistance in rural finance, in the LCs, institutions and other bodies. These direct interventions boil down to direct cash transfers to farmers. They stem from the assumption that producers need more capital than savings policy upon , their standard of living. The theoretical justification for these credits to producers is that, if they were granted to the agricultural sector, farmers would be much more encouraged to invest in agricultural mechanization such as tractors and fertilizers, which would have a positive impact on yields and therefore on local development.

Another assumption stands as to underlying the need for direct subsidy intervention through programs had been the bad reputation of so-called informal finance. The practice of usury rates by "bad lenders" was the order of the day [2].

In the 1980s, critics of cheap donor-funded direct intervention (credit) in rural areas pointed to the weaknesses of this over-optimistic approach, as few citizens were satisfied with the results achieved in low-income economies. Some indicators of corruption and embezzlement had entered the model. This inhibited people's expectations. Clearly, the provision of direct local funding through subsidies does not automatically produce the expected results. These loans program interventions have favored large-scale producers far more than small-scale producers.

## 2.2. Empirical Context

Diallo et al (2020) have shown that farmers with access to credit had 37.32% higher production than their counterparts. In the same vein, Ali et al (2014) found that lifting credit constraints led to an improvement in agricultural productivity of at least 17%.

Equating credit with access to financial services and farm size as a proxy for scale of production, Akudugu (2016) reveals a significant relationship between credit from formal and informal sources and agricultural production. Furthermore, he shows that the informal credit interactions with farm size; formal and informal credit with farm size have a positive and significant effect on production. In their study of credit constraints and productivity, Guirkinger and Bourcher (2008) conclude that household production is determined by their productive asset endowments.

Moreover, they find that formal credit constraints have a negative impact on the efficiency of resource allocation. These main results reflect the importance of credit in improving yields. Mbata (1991) also studied the impact of the supervised agricultural credit scheme first created by the Government of Rivers State (Nigeria) in 1975 as an agricultural development tool. A comparative analysis of the productivity of two groups of farmers who borrowed from formal sources and those who borrowed from informal was undertaken. The results of the study revealed that farmers who had access to supervised agricultural credit programs consumed more inputs, achieved higher yields and thus realized a higher agricultural profit per hectare than their counterparts who obtained credit in the informal sector. This was a direct impact of the supervised agricultural credit program on small –size farmers.

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Relating to the effects of agricultural finance on maize yield, in Nigeria, in 2017, Awotide et al after conducting a study on small farm holders have found that the output of maize-producing farmers with access to agricultural loans was 2.9% lower than those without access to agricultural finance.

The study also showed that small-scale farmers with access to finance tended to spend more resources on high-yielding crops at the expense of low-yielding crops such as maize. This study is timely in our literature review because the main beneficiaries of the subsidies whose impacts we want to assess are small-size producers.

In another study conducted by Chabala et al, 2020 in Zambia, results showed that farmers with access to agricultural loans had maize yields 7.3% lower than those of farmers without access to agricultural finance. The study also revealed that farmers with access to financing tended to invest in rental crops to the disadvantage of low-yielding crops.

In view of the mixed results observed in the literature, the issue of the role of credit in agricultural performance is still questionable. In case the financing set up is more in tune with the environment of farming populations, in that only half of the resources granted to producers are refunded and used to finance other producers. This study therefore contributes to enriching the available literature on the impact of access to financing on agricultural productivity in Benin Communes.

## 3. Research Methodology

The methodological approach revolves around two points: (i) the empirical model and (ii) the data used in this study.

### 3.1. Empirical Model

The analysis of the effect of the subsidies in place on the performance of PASDeR/ Swiss Cooperation beneficiaries calls for the estimation of qualitative choice models. For the purposes of this research, the statistical unit is the 'EFP', whose 'Chef d' Exploitation' (CE) may or may not be the beneficiary of the subsidy. Thus, our sample is made up of CEs who have benefited from subsidies and those who have not. Heckman's (1979) two-stage estimation procedure will be used to solve problems associated with the structural form of the probit model. Our methodology will therefore consist in presenting Heckman's model, which treats the bias generated by observable variables and incorporates the effects of unobservable via the Mills ratio.

Consider equation (1), which examines the impact of the subsidy on yield.

$$Y_i = \beta X_i + \alpha I_i + \mu_i \quad (1)$$

Where  $Y_i$  is the yield;

$X_i$  a vector of explicative variables;

$I_i$  a binary variable indicating whether or not CE  $i$  has benefited from the subsidy and

$\mu_i$  the error term.

Using the two-stage estimation method developed by Heckman (1979), the model can be formalized for each CE  $i$  as follows:

$$I_i = \delta Z_i + \varepsilon_i \quad (2) \text{ (Selection equation)}$$

$$Y_i = \beta X_i + \mu_i \quad (3) \text{ (Substantial equation)}$$

The model assumptions are as follows:

$\varepsilon_i$  according to a normal distribution  $N(0,1)$  ;

$\mu_i$  according to a normal distribution  $N(0, \delta_\mu)$ .

### 3.2 Data source and definition of grant allocation criteria

The data on which this research is based comes from the PASDeR/ Cooperation databases. As part of program monitoring, data is collected from beneficiaries to measure the extent to which program targets have been met. To be more specific, the data used in this research concerns those collected from beneficiaries setting up in 2021.

### 3.3. Definition of the sample

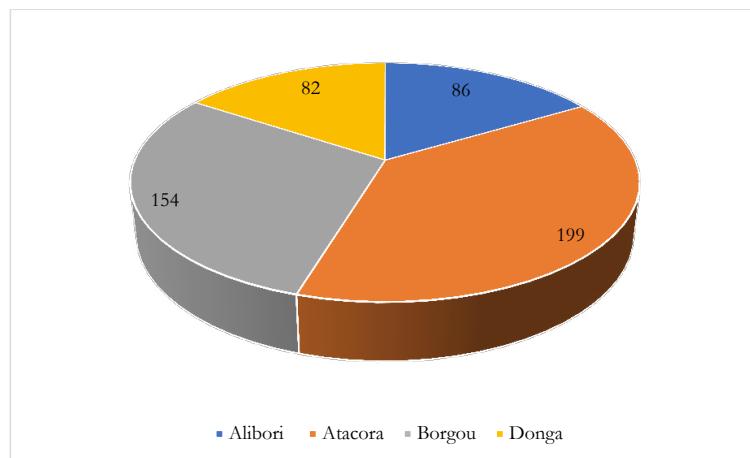
The statistical unit considered in this research is the Family

Farming, defined as : « *a group of people (on average 07 producers) belonging to the same family or not, who work together under the orders of one of their members to produce one or more agricultural crops in order to meet their nutritional needs and generate income.* » (Agronomist's Momentum). In the case of agricultural activities, the CE is the person primarily responsible. The subsidy is granted to him/her to carry out

activities within the EFP he/she manages.

### 3.4. Spatial distribution of sample units

The program intervention zone covers the departments of Alibori, Borgou, Atacora and Donga. Thus, the sample used in this research has a size of 521 EFPs distributed as follows:



**Source:** Investigation data , PASDeR/Swiss Cooperation

**Figure 1:** Distribution of VETs Per Department

### 4. The sex

The data base used for effective analysis to the survey has focused on 360 EFP beneficiaries of subsidies as opposed to 161

non- beneficiaries. The table below introduces the distribution of CE per sex accordingly to the subsidy.

	Size	Percentage
<b>Subsidized</b>	<b>360</b>	<b>69,10%</b>
Female	63	12,09%
Male	297	57,01%
<b>Non Subsidized</b>	<b>161</b>	<b>30,90%</b>
Female	29	5,57%
Male	132	25,34%
<b>Total</b>	<b>521</b>	<b>100%</b>

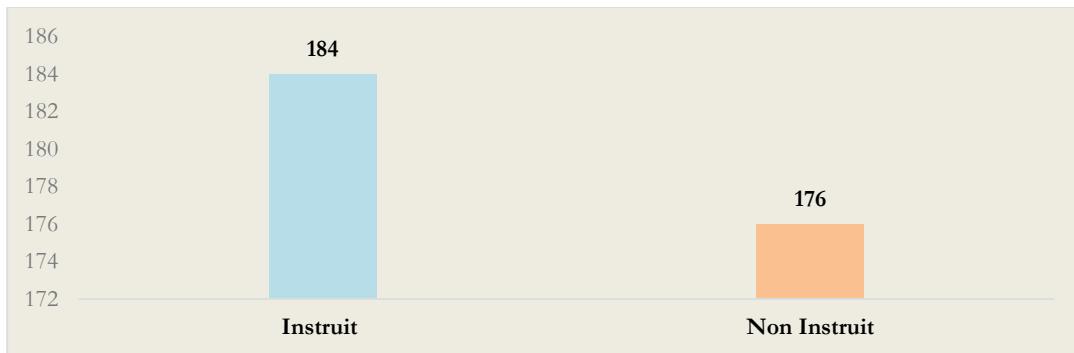
**Source :** Investigation data, PASDeR/Swiss Cooperation

**Table 1: Sample Units by Gender and Subsidy**

### 5. Level of instruction

The study population is almost distributed according to educational level, with a slight dominance of CEs with less than primary school education (non- educated). They represent 54.32% of sample units.

The following figure shows the distribution of CEs with regards to access to financing.



**Source:** Investigation Data PASDeR/ Swiss Cooperation

**Figure 2:** Financing Statistics as Per Level of Education

This graph shows that the educated CEs have been granted subsidies from Swiss Cooperation than the uneducated ones. A priori, one could understand a kind of discrimination between the two groups with regards to the granting, but the difference between the two groups is not significant.

## 6. Granting Amount

With regards to the financing of VET under PASDeR, Swiss Cooperation has made funds available according to the size of the area to be settled for the VET micro-project. For a micro-project involving the cultivation of one hectare of land, the amount granted is 151,000 F CFA, compared with 287,000 F

CFA when the area to be cultivated is equal to or greater than 2 hectares.

## 7. Results and Discussions

This section includes descriptive analyses of variables model, presentation and interpretation of estimation, model validation tests and policy suggestions.

### 7.1. Descriptive Analysis of the Variables

For the purposes of this research, a descriptive analysis of the main variables is supplied in the following table.

	Age du CE	Quantité de semences	Quantité NPK	Quantité Urée	Total Charges	Superficie	Rendement	Revenu
Minimum	18	4	0	0	3 200	0,12	200	- 114 250
Moyenne	41	44,46	307,5	152,70	296 181	2,00	1 557	142 792
Ecart-type	9,98	19,88	156,39	78,15	129 720	0,74	456,17	142 397
Maximum	76	160	850	400	1 043 500	6,75	2900	1 361 500

**Source:** Investigation data, PASDeR/ Swiss Cooperation, 2023

**Table 2: Descriptive Statistics of Variables Model**

	Ensemble	Non subventionné	Subventionné	P-value
Rendement	1 557	1368,006	1641,19	1,33E-07
Superficie	2,00	1,65	2,01	1,74E-04
Revenu	142 792	171 669	129 877	0,02899
Age du CE	41	39	41,65833	0,006386
Sexe	82,34%	81,99%	82,22%	0,9861
Niveau d'Instruction	54,32%	61,49%	51,11%	0,0355
Utilisation de semences certifiées	52,40%	19,88%	66,94%	2,20E-16

**Source :** Investigation data PASDeR/ Swiss Cooperation

**Table 3: Socio-economic Characteristics of VSEs**

The analysis of the table above shows that the sample units have an average yield of 1,557 kg/ha, with a maximum yield of 2,900 kg/ha and a minimum of 200 kg/ha. The variability around this average is 434.62 Kg/ha. This average maize yield was achieved with an average plantation area of 2 ha, as the program supports small-size producers. The largest area plantation was 6.75 ha, while the smallest was 0.12 ha. To cultivate these areas, the PFEs in our sample used an average of 44.46 kg of seed, 307.5

kg of NPK and 152.70 kg of urea. In addition, some EFPs used an average of 244 Kg of other inputs. The CEs in our database range in age from 18 to 76, with an average age of 41.

Subsidies were granted to 69.10% of the study population. The cross-analysis of performance and subsidy profitability shows that VETs that received financial subsidies appear to have achieved a higher average performance. The Student t -

test carried out for this purpose reveals the significance (5%) of the difference in average yield between the two groups. This result suggests a positive effect of financial subsidies on yield, and therefore on local development. Similarly, it seems that the subsidies granted induced beneficiaries to plant more seed. Indeed, the average sowing area among subsidized VFEs is 2.01 ha, compared with 1.65 ha among non-beneficiaries. It is also higher than the average area sown in the sample as a whole. The test of equality of means proves that the difference in area sown observed between the two groups of PFEs is significant at the 5% threshold. We also carried out tests of proportions on certain

qualitative variables. This has shown that for level of education and use or non-usage of certified seed, the difference between subsidy beneficiaries and non-beneficiaries was statistically significant at the 5% threshold.

## 7.2. Estimation results and interpretation

### 7.2.1. First-Stage Probit Estimation Results for the Heckman Model

In the first stage, probit estimation enabled us to explain the ways in which VETs have benefited or not benefited from financial subsidies, as shown in the following table:

Dependent variable : Financial subsidy		
	Coefficient	Pr(> z )
Sex (Male)	-0.121	0.302
Age	0.019 *	0.011
Area	0.577 ***	0.193
Level of instruction (Not literate)	0.501 **	0.245
Certified seeds (Yes)	0.357	0.243
Other inputs (Yes)	1.461 ***	0.253
Quantity of seeds	-0.050 ***	0.010
Quantity of NPK	0.005 ***	0.002
Quantity of Urea	0.010 ***	0.003
Total expenses	-0.325	0.302
Constant	0.898	3.395
Observations		521
Log Likelihood		-81.75
Akaike Inf. Crit.		185.5

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Source: Investigation Data PASDeR/Swiss Cooperation, 2023

Table 4: Results of Probit Estimation

After estimating the probit in the first stage of the Heckman model, we note that age, quantities of urea, NPK, seeds, use of other inputs, level of education and area are significant.

The use of other inputs in production, quantities of NPK and urea used are particularly highly significant variables (at the 1% threshold). When the EFP's sown area increases by one unit, the probability of receiving the financial subsidy increases by 58%. This result is in connection with that of Sadoulet and de Janvry (1995) in Mexico and Kihoro et al, (2007) in Kenya but contrary to the results of Omondi and Otieno (2018) in Kenya. But in linkage to our research, we can explain this result by the fact that although the program supports small farmers, it also takes into account the profitability of the farm by making the assumption that the greater the area sown, the greater the yield. In fact, the average area sown to maize for subsidy recipients is 2.01 ha, which is significantly higher than for non-beneficiaries. Also, when the EFP uses other types of inputs, it has every chance of benefiting from the subsidy. This result supports the analysis of the positive significance of the area variable. Thus, we can see that the use of other types of inputs to increase production is of importance as criterion for granting subsidies.

The quantities of NPK and urea used in maize production at the

VET level are significant at 1% and positively correlated with access to subsidies. When the quantity of NPK used increases by one unit, the probability of benefiting from Swiss Cooperation funding increases by 0.5%. Similarly, when the quantity of urea used increases by one unit, the probability of benefiting from the subsidy increases by 1%. These results are in connection to those of Omotilewa and Ogunlana (2018) in Nigeria and Kihoro et al, 2007 in Kenya. We can therefore understand these two results by the fact that when facing to declining land productivity in Africa and particularly in Benin, the use of inputs is almost compulsory in maize production.

At 5%, the level of education is positively significant. So, when the 'FT' is uneducated, it increases its probability of benefiting from subsidies by 50%. This result shows that the financing grant takes into consideration the fact that the population of Benin, especially those more involved in the agricultural sector, are much more likely to be uneducated. This result is opposed to those of Saqib et al (2018), who note that farmers' access to credit increases with education level thanks to better technical knowledge, a better understanding of markets and how to obtain credit. This contradiction thus allows us to point out the inadequacy of the methods used by banks and microfinance

institutions to set up financing for producers, offering the high proportion of illiterates in their ranks. It is with this in mind that Louis AGBOKOU asserts that the support provided by projects/programs, and in this case in terms of agricultural financing, is much better suited to the rural populations of our Communes.

The age variable is significant at 10% and positively correlated with access to subsidies. This means that when the CE's age increases by one unit, the probability of receiving funding increases by 2%. The findings of Nkonya et al, (2010) in Ethiopia and Akinola and Afolayan (2013) in Nigeria are consistent with this result.

In view of these results, we can affirm that the criteria used by Swiss Cooperation to award grants to program beneficiaries

are optimal and take into account the environment of rural populations. To that end, our first hypothesis is validated.

### 7.2.2. Results of the second stage of the Heckman model

The aim of this section is to present the results of incorporating the residuals from the probit model estimated in the first stage into the regression model for the effect of treatment on yield, in order to control for bias. As a result of this estimation, when we take a closer look at the inverse of the Mills ratio, we realize that it is positively significant at 1% threshold, which means that there are really individuals within the sample who have unobservable characteristics that influence the selection process of subsidy recipients. The following table specifies detailed results from the estimation.

**Dependent variable : Corn yield**

	Coefficient	Pr(> z )
Total expenses	0.017	0.066
Level of instruction (Not literate)	0.052 *	0.029
Certified seeds (Yes)	0.002	0.035
Quantity of seeds	-0.002	0.002
Other inputs (Yes)	0.245 ***	0.056
Quantity of NPK	0.002 ***	0.001
Quantity of Urea	-0.003 ***	0.001
Constant	6.575 ***	0.774
Inverse Mills Ratio	0.347 ***	0.102
Observations		521
R2		0.105
Adjusted R2		0.083
rho		1.346

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

**Source :** Investigation data, PASDeR/Swiss Cooperation

**Table 5 : Results of the Second Stage of Heckman Estimation**

In the remainder of this work, we estimate the Heckman model to correct for selection bias in the data and estimate the causal effect of treatment on maize yield at sample unit level.

After correcting selection bias, the estimation found where variables such as total expenses, usage of other inputs, amount of NPK , amount of seed and receipt of financial subsidy had a significant effect on maize yield at the FFS level.

The results show that fertilizer usage is a key factor in explaining yield. Indeed, at the 1% threshold, the use of other types of inputs and the quantities of NPK used are positively significant. This result indicates that these two variables have a positive impact on maize yield. This result is in accordance with the findings of Tange et al. (2018), who showed that the use of NPK fertilizers significantly increased maize yield in two different agri ecosystems in Uganda. Furthermore, the

significance of operating expenses at the 1% threshold at the end of the estimation further supports this previous result. Indeed, when operating costs increase by 1% with the aim of the EFP purchasing seeds and fertilizer, maize yield improves by 24%. This result confirms that of Otieno et al, 2017 in Kenya, Kamara et al, 2017 in Sierra-Leone and Fiamohé et al. (2017) in Togo.

We also note that the financial subsidy variable makes a significant negative contribution at the 1% threshold to explaining maize yield at the VET level in our sample. The results allow us to conclude that the financial subsidy reduces the yield of the EFPs by 40%. Such result, in addition is consistent with those of Agbodji et al. (2019), enriches the literature in the sense that it brings a new conclusion to the ongoing debate on the impact of agricultural financing on yield and therefore on grassroots development.

Dependent variable : Corn yield		
	Coefficient	Pr(> z )
Total expenses	0.240 ***	0.046
Level of instruction (Not literate)	0.029	0.032
Certified seeds (Yes)	-0.029	0.038
Quantity of seed	-0.003 ***	0.001
Other type of inputs (Yes)	0.229 ***	0.055
Quantity of NPK	0.001 ***	0.0002
Quantity of Urea	0.0003	0.0005
Financial subsidy	-0.408 ***	0.106
Constant	4.259 ***	0.523
Observations		521
Log Likelihood		-227.906
rho	0.688 ***	0.128

Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Source : Author based on Data from PASDeR/ Swiss Cooperation

**Table 6: Estimated Causal Effect of Treatment on Maize Yield**

Thus, in the light of this serial estimations carried out to study the effect of subsidies granted to the EFP to produce maize within the framework of Swiss Cooperation funding, we realize that this support has a negative influence on productivity. Our second hypothesis is therefore non-validated.

This conclusion leads us to look at the value of these subsidies compared with the expenses incurred by the CEs in their production. In fact, the average cost of one hectare of maize production in the PFEs is 234,580 F CFA, while the amount of subsidy is 151,000 F CFA for those farming 1 ha, and 287,000 F CFA for PFEs farming more than 2 ha. This shows that the amount granted is low in relation to the needs of the EFPs, even though the said EFPs have no substantial means of making up the shortfall in terms of funding. It should be noted that the advent of the COVID19 pandemic has led to soaring prices for fertilizers and phytosanitary products. Likewise, the cost of labor to carry out cultivation activities continues to rise. In addition, the low level of funding may attempt to EFPs to use resources for other purposes or to finance the production of more profitable crops, in this case soybeans. Future research should confirm or deny this tendency.

## 8. Conclusion

This research was carried out with the aim of assessing the effect of PASDeR/Swiss Cooperation funding on the maize yields of its beneficiaries. The analyses in this work focused exclusively on small-size maize producers benefiting from the subsidies.

Based on the estimation results obtained, we found firstly that the selection process for beneficiaries of financial subsidies is optimal, in that the variables found to be significant show that beneficiaries are selected taking into account the profitability of the micro-projects submitted and the socio-economic contexts of rural Benin. Then, in the second stage, the results of the Heckman model estimation revealed the significance of the reversal aspect of the Mills ratio, all of which testifies to the effective presence

of bias in the selection of the beneficiaries of the so-called subsidies. This result legitimizes the use of this model in our research. After correcting for selection bias, we concluded that the financial subsidy was significant in explaining maize yield of the sample units in our database. However, the correlation between financial subsidy and maize yield was negative. To sum up, these results enabled us to accept our first hypothesis and refute the second.

From then on, we turned our attention to the amount of subsidies granted. Although the effort made by the program to improve the conditions of its beneficiaries is commendable, we realize that the average cost of farming one hectare of maize in our sample units is higher than the subsidy granted. This is an enormous difference, and does not allow beneficiaries to meet their operating costs effectively. In fact, the program target group is mainly poor and does not have easy access to conventional financial services to bridge the financing gap. In addition, the negative correlation observed may be due to the delay in setting up these financing arrangements, since meeting the deadlines for the various cultivation operations has an impact on yield. In view of all these observations, we suggested that subsidies should be analyzed on a case-by-case basis, taking into account the considerations of each farm for grassroots development. Elected representatives need to be closely involved, and an in-depth diagnosis of the real and complete needs of farming needs to be carried out. It is important to monitor beneficiaries strictly, to avoid embezzlement of the subsidy to other crops not initially taken into account [3-23].

## References

- Asante, B. O., Temoso, O., Addai, K. N., & Villano, R. A. (2019). Evaluating productivity gaps in maize production across different agroecological zones in Ghana. *Agricultural Systems*, 176, 102650.
- Gurgand, M. (1993). Les effets de l'éducation sur la production agricole. Application à la Côte-d'Ivoire. *Revue*

- d'économie du développement*, 1(4), 37-54.
3. Assouto, A. B., & HOUNGBEME, D. (2020). Accès au crédit et productivité agricole: Evidences auprès des Producteurs de maïs au Bénin. In *AERC Biannual Workshop*, 20p.
  4. Agbodji, A. E., & Johnson, A. A. (2021). Agricultural credit and its impact on the productivity of certain cereals in Togo. *Emerging Markets Finance and Trade*, 57(12), 3320-3336.
  5. Baki, A. A. O. D., & Yacouba, A. S. (2018). Effet de la subvention d'engrais sur le rendement du riz au Niger: Analyse par le modèle d'Heckman à deux étapes. *Journal of Applied Biosciences*, 124, 12489-12496.
  6. Badouin R, 1971. L'économie rivale. Malakoff : Collection Dunod.
  7. Diallo, M. F., Zhou, J. J., Elham, H., & Zhou, D. (2020). Effect of agricultural credit access on rice productivity: Evidence from the irrigated area of Anambe Basin, *Senegal. Journal of agricultural science*, 12(3), 78-87.
  8. Diallo, A., Mbaye, B. B., & Thiaw, K. (2013). Productivité agricole, croissance économique et pauvreté au Sénégal: analyse par un MEGC dynamique récursif en micro simulation. *Direction de la Prévision et des Etudes Economiques, Sénégal*.
  9. Girard, P., & Douillet, M. (2013). Productivité agricole: des motifs d'inquiétude. *FARM, note*, (7).
  10. Guirkinger, C., & Boucher, S. R. (2008). Credit constraints and productivity in Peruvian agriculture. *Agricultural Economics*, 39(3), 295-308.
  11. Heckman, J.J. (1979). Sample selection bias as a specification error. *Econometrica: Journal of the econometric society*, 153-161.
  12. Higgins, S., & Leturque, H. (2010). Améliorer la productivité agricole en Afrique: Quelles actions? Quel rôle pour les subventions.
  13. INSAE/EMICoV (2015). Enquête Modulaire Intégrée sur les Conditions de Vie des Ménages (EMICOV). Note sur la pauvreté au Bénin en 2015. INSAE, octobre 2015, 29p.
  14. Khan, M. N., Khan, M., Abassi, S. S., Anwar, S., Ali, M., & Naheed, S. (2013). The Effect of Zarai Taraqiat Bank in Enhacing Farm Productivity through Agricultural Credit-A Case Study of District Lakki Marwat, KPK-Pakistan. *Research Journal of Agriculture and Forestry Sciences*
  15. Khandker, S. R., & Koolwal, G. B. (2016). How has microcredit supported agriculture? Evidence using panel data from Bangladesh. *Agricultural Economics*, 47(2), 157-168.
  16. MAEP. (2018). Plan Stratégique de Développement du Secteur Agricole. République du Bénin. Ministère de l'Agriculture de l'Elevage et de la Pêche.
  17. Mounier, A. (1992). Théories économiques de la croissance agricole.
  18. Njeru, T. N., Mano, Y., & Otsuka, K. (2016). Role of access to credit in rice production in sub-Saharan Africa: The case of Mwea irrigation scheme in Kenya. *Journal of African Economies*, 25(2), 300-321.
  19. Nwaru, J. C., & Onuoha, R. E. (2010). Credit use and technical change in smallholder food crop production in Imo State of Nigeria. *New York Science Journal*, 3(11), 144-151.
  20. Otsuka, K., & Larson, D. F. (2016). In Pursuit of an African Green Revolution. Springer.
  21. Seck, A. (2021). Heterogeneous credit constraints and smallholder farming productivity in the Senegal River Valley. *Emerging Markets Finance and Trade*, 57(12), 3301-3319.
  22. Tange Denis Achiri, 2018. Impact de la fertilisation NPK sur la croissance et le rendement du maïs CHC202 (*Zea mays L*) à Bali Nyonga, région du Nord-Ouest Cameroun, pp. 20-24.

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## Appendices: Probit Estimation Result

Deviance Residuals:

	Min	1Q	Median	3Q	Max
	-3.5287	-0.0848	0.1092	0.2435	1.8113

Coefficients:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	0.898432	3.395231	0.265	0.791305
m\$SexeMasculin	-0.120794	0.302043	-0.400	0.689214
m\$Age	0.019219	0.010672	1.801	0.071706 .
m\$Superficie	0.576525	0.193364	2.982	0.002868 **
m\$Niveau.d.instructionNon instruit	0.500541	0.244575	2.047	0.040700 *
m\$Semences.certifieeoui	0.356940	0.242742	1.470	0.141440
m\$Autres.intrantsoui	1.461429	0.252818	5.781	7.45e-09 ***
m\$Qte.semences	-0.050055	0.010441	-4.794	1.63e-06 ***
m\$Qte.NPK	0.004876	0.001619	3.013	0.002589 **
m\$Qte.Uree	0.010320	0.003010	3.429	0.000606 ***
log(m\$charge.totale)	-0.324828	0.301875	-1.076	0.281912

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 612.06 on 482 degrees of freedom  
Residual deviance: 163.50 on 472 degrees of freedom  
(38 observations deleted due to missingness)  
AIC: 185.5

Number of Fisher Scoring iterations: 8

## Appendices: Results of the Second Stage of Heckman Estimation

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Tobit 2 model (sample selection model)  
2-step Heckman / heckit estimation  
483 observations (159 censored and 324 observed)  
22 free parameters (df = 462)  
Probit selection equation:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.898551	3.507414	0.256	0.797921
m\$SexeMasculin	-0.120792	0.313534	-0.385	0.700223
m\$Age	0.019220	0.011064	1.737	0.083022 .
m\$Superficie	0.576529	0.199129	2.895	0.003968 **
m\$Niveau.d.instructionNon instruit	0.500541	0.253527	1.974	0.048941 *
m\$Semences.certifieeoui	0.356935	0.244916	1.457	0.145692
m\$Autres.intrantsoui	1.461437	0.256337	5.701	2.12e-08 ***
m\$Qte.semences	-0.050056	0.010588	-4.728	3.02e-06 ***
m\$Qte.NPK	0.004876	0.001660	2.937	0.003482 **
m\$Qte.Uree	0.010320	0.003002	3.438	0.000639 ***
log(m\$charge.totale)	-0.324839	0.312117	-1.041	0.298532

Outcome equation:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	6.5755225	0.7743982	8.491	2.82e-16 ***
log(m\$charge.totale)	0.0167505	0.0661313	0.253	0.800155
m\$Niveau.d.instructionNon instruit	0.0517968	0.0288021	1.798	0.072772 .
m\$Semences.certifieeoui	0.0020998	0.0346911	0.061	0.951762
m\$Qte.semences	-0.0019324	0.0021802	-0.886	0.375896
m\$Autres.intrantsoui	0.2446821	0.0562897	4.347	1.70e-05 ***
m\$Qte.NPK	0.0024613	0.0006664	3.694	0.000247 ***
m\$Qte.Uree	-0.0028601	0.0010299	-2.777	0.005708 **

Multiple R-Squared: 0.1053, Adjusted R-Squared: 0.0826

Error terms:

	Estimate	Std. Error	t value	Pr(> t )
invMillsRatio	0.3473	0.1017	3.416	0.000691 ***
sigma	0.2580	NA	NA	NA
rho	1.3459	NA	NA	NA

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Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

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## Appendices 3: Database

Sexe	Age	Niveau d'instruction	Autres intrants	Semences certifiée	Qte semences	Qte NPK	Qte Uree	Qte autres intrants	Coum semence	Cout NPK	Cout NPK	Cout autres intrants	Production	Superficie	Rendement	Chiffre affaires	Charge totale	Revenu	Subvention financiere	
Masculin	52	Institut	Oui	Oui	21	200	100	200	100	16800	104000	52000	16000	3400	2	1700	408000	150400	107200	1
Feminin	38	Non institut	Oui	Non	30	200	100	400	400	8750	104000	52000	4000	1500	1	1500	520000	258175	261825	1
Masculin	55	Institut	Oui	Oui	25	200	100	250	125	20000	104000	52000	25000	3500	2	1750	420000	160500	99000	1
Masculin	32	Institut	Non	Non	32	200	100	133	532	3600	34580	17450		400	0.25	400	17500	12800	14300	0
Masculin	55	Non institut	Non	Non	25	80	70	0	5000	25600	22400		1000	1	1000	215000	164600	50400	0	
Masculin	40	Non institut	Non	Oui	22.5	200	100	0	11250	104000	52000		3200	2	1600	450000	168125	113750	1	
Masculin	50	Institut	Non	Non	30	10	100	0	15000	150000	60000		1600	1	1280	344000	96000	248000	0	
Feminin	50	Non institut	Oui	Oui	25	200	100	200	100	20000	104000	52000	16000	4100	2	2050	588000	216000	156000	1
Masculin	50	Non institut	Oui	Oui	30	200	100	300	300	12600	104000	52000	30000	1200	1	2500	500000	336600	163400	0
Masculin	27	Non institut	Non	Non	22	200	100	0	2500	104000	52000		730	1	730	109500	119500	0	0	
Feminin	52	Institut	Oui	Oui	22.5	200	100	200	100	9000	104000	52000	16000	1800	2	900	427500	195000	37500	1
Masculin	30	Non institut	Non	Non	15	200	100	0	3000	104000	52000		1300	1	1500	225000	63000	162000	0	
Masculin	40	Institut	Non	Oui	30	200	100	0	16800	112000	56000		1200	1	1200	420000	358800	61200	1	
Masculin	31	Institut	Non	Oui	20	200	100	0	16000	104000	52000		3000	2	1500	360000	142500	75000	1	
Masculin	26	Institut	Non	Oui	20	200	100	0	16000	104000	52000		3100	2	1550	490000	173725	142550	1	
Masculin	61	Institut	Non	Oui	20	200	100	0	16000	104000	52000		3000	2	1500	360000	143500	73000	1	
Feminin	24	Institut	Non	Oui	20	200	100	0	16000	104000	52000		2500	2	1250	362500	143500	75500	1	
Masculin	33	Institut	Non	Non	25	102.5	50	0	9000	133000	29000		2400	2	1550	620000	209500	201000	0	
Masculin	60	Institut	Non	Oui	20	200	100	0	16000	104000	52000		4500	2	2250	540000	160400	219200	1	
Feminin	22	Non institut	Non	Oui	23.6842105	131.578947	131.578947	0	3475	20000	23000		250	0.38	658	54300	214681.579	0	0	
Feminin	52	Institut	Oui	Oui	22.5	200	100	300	150	13500	112000	56000	30000	2400	2	1200	500000	171750	156500	1
Masculin	35	Institut	Non	Non	30	200	100	0	2750	104000	52000		800	1	1200	138000	46950	91050	0	
Feminin	35	Institut	Non	Non	32	200	100	0	5000	52000	7000		587	0.25	2348	88000	107940	61015	0	
Masculin	37	Non institut	Oui	Oui	20	200	100	200	100	20000	104000	52000	16000	3300	2	1650	408000	136000	136000	1
Masculin	26	Institut	Non	Oui	21.0526316	131.578947	131.578947	0	3000	21000	42000		560	0.38	1474	126000	311000	7820	0	
Masculin	44	Non institut	Oui	Oui	32	160	200	200	100	17500	104000	52000	16000	4200	2	2100	420000	1238000	110500	1
Masculin	62	Institut	Non	Non	20	200	100	0	10000	104000	52000		2000	2	1333	626000	65950	494100	0	
Masculin	40	Non institut	Oui	Oui	20	200	100	300	150	16000	112000	56000	30000	4000	2	2000	600000	224500	151000	1
Masculin	37	Non institut	Oui	Oui	25	200	100	200	100	25000	104000	52000	16000	3500	2	1750	420000	141000	138000	1
Feminin	55	Institut	Oui	Oui	25	200	100	250	125	20000	104000	52000	25000	3500	2	1750	420000	180500	59000	1
Masculin	34	Non institut	Oui	Oui	20	200	100	200	100	20000	104000	52000	16000	3500	2	1750	420000	138500	143000	1
Masculin	47	Non institut	Oui	Oui	25	200	100	500	250	10000	104000	52000	40000	3600	2	1800	620000	182948	254104	1
Masculin	57	Institut	Non	Oui	48	75	100	0	72000	42000	52000		2500	2	1620	754920	203758	347404	0	
Masculin	55	Institut	Oui	Oui	25	200	100	350	175	20000	104000	52000	35000	3600	2	1800	432000	185500	61000	1
Masculin	43	Non institut	Oui	Oui	20	200	100	250	125	20000	104000	52000	22500	3500	2	1750	420000	151378	117244	1
Masculin	27	Institut	Non	Non	25	38.3333333	17.3333333	0	15000	164006	44500		3200	3	1138	683000	161935.333	197194	0	
Masculin	44	Non institut	Non	Oui	41.6666667	166.6666667	208.333333	0	1400	21000	21000		315	0.12	1260	220500	351546.667	177850	0	
Masculin	34	Non institut	Oui	Oui	13.3333333	133.3333333	66.6666667	200	104000	52000	16000		3400	3	1360	520000	115933.333	172200	1	
Masculin	35	Non institut	Oui	Oui	20	200	100	200	100	14000	104000	52000	14000	3600	2	1800	486399	170000	146399	1
Masculin	29	Non institut	Non	Non	30	200	100	0	4500	104000	52000		1300	1	1700	255000	91300	163700	0	
Feminin	39	Institut	Oui	Non	12.5	100	50	300	75	8750	104000	52000	24000	5000	4	1429	500000	82037.5	171850	1
Feminin	38	Non institut	Non	Oui	30	200	100	0	14400	112000	56000		2500	1	2500	300000	303400	0	1	
Masculin	46	Institut	Non	Oui	20	200	100	0	16000	104000	52000		1900	2	950	488062	157875	172312	1	
Masculin	45	Non institut	Non	Oui	20	200	100	0	16000	104000	52000		1800	2	900	377555	167250	43055	1	
Feminin	55	Institut	Oui	Oui	25	200	100	200	100	18750	104000	52000	16000	3500	2	1750	420000	193625	32750	1
Masculin	34	Non institut	Oui	Oui	26.6666667	133.333333	66.6666667	250	83.3333333	20000	104000	52000	22500	3600	3	1440	432000	89656.6667	163030	1
Masculin	38	Non institut	Oui	Non	30	200	100	200	100	12000	106000	52000	16000	3800	2	1900	350000	149500	51000	1
Feminin	35	Institut	Oui	Non	30	200	100	200	100	12000	104000	52000	16000	4000	2	2000	480000	176000	128000	1
Masculin	45	Non institut	Oui	Non	30	200	100	200	100	12000	104000	52000	16000	2600	2	1300	384000	158000	68000	1
Masculin	50	Institut	Non	Non	30	200	100	200	100	12000	104000	52000	16000	4000	2	2000	450000	194750	60500	1
Masculin	59	Institut	Non	Non	20	200	100	0	300	104000	52000		3600	2	1800	525000	165900	193200	1	
Masculin	45	Institut	Oui	Oui	22.5	200	100	200	100	22500	104000	52000	16000	1700	2	850	360750	163250	34250	1
Masculin	36	Institut	Oui	Non	30	200	100	200	100	12000	104000	52000	16000	3709	2	1855	525000	176000	173000	1
Masculin	38	Institut	Oui	Oui	25	200	100	200	100	17500	104000	52000	16000	1200	2	600	522000	208750	104500	1
Masculin	43	Institut	Oui	Non	25	200	100	500	250	8750	104000	52000	40000	4100	2	2050	462840	152375	158090	1
Feminin	53	Non institut	Non	Non	20	200	100	0	8000	52000	26000		1800	1	1800	457200	258800	198400	1	
Masculin	32	Institut	Non	Non	15	200	50	0	4100	52000	21000		800	1	1300	152750	84550	68200	0	
Masculin	47	Institut	Non	Onon	20	80	60	0	3500	26400	19800		1300	1	1600	344000	151700	192300	0	
Masculin	40	Institut	Oui	Oui	26.6666667	133.333333	66.6666667	200	66.6666667	20000	104000	52000	18000	3600	3	1200	432000	93466.6667	151600	1
Feminin	47	Non institut	Oui	Oui	25	200	100	200	100	20000	104000	52000	16000	4100	2	2050	540000	196000	148000	1
Masculin	30	Non institut	Oui	Oui	24.5	200</td														

Masculin	33	Instruit	Non	Non	20	50	25		0	2000	16000	4000		700	1	1400	105500	99000	6500	0
Masculin	25	Instruit	Oui	Oui	20	200	100	200	100	20000	104000	52000	18000	3600	2	1800	432000	146020	139960	1
Masculin	35	Instruit	Non	Oui	20	200	100		0	16000	104000	52000		2640	2	1320	434676	146000	142676	1
Masculin	34	Non instruit	Oui	Oui	20	200	100	250	125	20000	104000	52000	22500	3500	2	1750	420000	148270	123460	1
Feminin	38	Instruit	Oui	Non	25	200	100	400	200	8750	104000	52000	32000	4100	2	2050	480000	146550	186900	1
Masculin	30	Instruit	Non	Non	23	200	0		0	4000	56000	0		1240	1	1240	206000	106900	99100	0
Masculin	45	Non instruit	Oui	Oui	20	200	100	200	100	20000	104000	52000	18000	3300	2	1650	390000	142150	105700	1
Masculin	32	Non instruit	Oui	Oui	25	200	100	200	100	25000	104000	52000	16000	3600	2	1800	481000	197500	86000	1
Masculin	51	Non instruit	Non	Non	16	160	0		0	1000	2000	0		276	0.25	2300	34500	58000	20000	0
Feminin	50	Non instruit	Oui	Oui	25	200	100	200	100	17500	104000	52000	16000	3680	2	1840	432000	166750	98500	1
Masculin	44	Instruit	Non	Non	27.5	3.75	25		0	22000	210	28000		4400	4	1100	880000	84102.5	543590	0
Feminin	28	Instruit	Oui	Oui	17.5	200	100	200	100	14000	108000	54000	16000	1800	2	900	540000	142400	255200	1
Masculin	45	Instruit	Non	Oui	25	200	100		0	20000	104000	52000		3600	2	1800	426000	114000	198000	1
Feminin	56	Non instruit	Oui	Non	30	200	100	300	300	6075	112000	56000	30000	2000	1	2000	500000	306135	193865	1
Masculin	25	Instruit	Non	Oui	31	52	52		0	7000	45000	47000		1620	1	1620	324000	300700	23300	0
Masculin	41	Non instruit	Non	Non	27	150	50		0	7000	42000	14000		1350	1	1700	452000	183554	268446	0
Masculin	58	Instruit	Oui	Non	25	200	100	600	300	10000	104000	52000	24000	2900	2	1450	570000	174200	221600	1
Feminin	45	Instruit	Oui	Oui	22.5	200	100	200	100	15750	104000	52000	16000	4197	2	2099	650000	184625	280750	1
Masculin	34	Instruit	Non	Oui	20.5	200	100		0	16400	104000	52000		3500	2	1750	420000	153700	112600	1
Masculin	38	Instruit	Non	Non	10	100	50		0	7000	52000	26000		3600	2	1800	432000	79475	273050	1
Masculin	45	Instruit	Oui	Non	20	200	100	200	100	8000	104000	52000	16000	3727	2	1864	410040	180000	50040	1
Masculin	31	Instruit	Non	Oui	23.6842105	0	0		0	10000	0	0		500	0.38	2000	75000	163157.895	13000	0
Feminin	31	Instruit	Oui	Non	16.6666667	133.333333	66.6666667	200	66.6666667	10000	104000	52000	16000	5600	3	1867	495000	126666.667	115000	1
Masculin	37	Instruit	Non	Non	25	25	12.5		0	6000	28000	14000		3500	4	1000	525000	47625	334500	0
Masculin	40	Instruit	Oui	Non	30	200	100	400	200	10500	104000	52000	4000	2500	2	1250	367125	105287.5	156550	1
Masculin	59	Instruit	Non	Oui	20	200	100		0	16000	104000	52000		1550	2	775	546533	164650	217233	1
Masculin	32	Non instruit	Non	Non	20	100	150		0	5625	40000	63000		1150	1	1150	212750	184225	28525	0
Masculin	28	Instruit	Non	Non	40	187.5	0		0	32000	225000	0		4200	4	1575	2025000	225250	1124000	0
Masculin	28	Instruit	Oui	Oui	22.5	200	100	200	100	15750	104000	52000	14000	3800	2	1900	450000	182875	84250	1
Masculin	42	Non instruit	Non	Non	10	100	50		0	8000	52000	26000		2814	2	1876	453888	131626.5	190635	1
Masculin	47	Instruit	Non	Oui	20	200	100		0	16000	112000	56000		1800	2	900	296370	152500	0	1
Masculin	29	Instruit	Non	Non	12	125	37.5		0	5000	70000	21000		2200	2	1467	512600	124700	263200	0
Masculin	47	Non instruit	Oui	Oui	25	200	100	200	100	12500	104000	52000	16000	3600	2	1800	432000	182250	67500	1
Masculin	35	Non instruit	Oui	Oui	27.5	200	100	200	100	19250	104000	52000	14000	4800	2	2400	512500	188375	135759	1
Masculin	38	Non instruit	Non	Oui	30	175	75		0	14000	119000	51000		2800	2	2000	577000	213720	149560	0
Masculin	45	Non instruit	Oui	Oui	25	200	100	200	100	17500	104000	52000	16000	3500	2	1750	420000	157250	105500	1
Masculin	38	Non instruit	Oui	Oui	17.5	200	100	200	100	17500	104000	52000	16000	3600	2	1800	550000	177750	194500	1
Masculin	44	Instruit	Non	Non	30	100	0		0	4500	30000	0		1900	1	1900	380000	113500	266500	0
Masculin	51	Non instruit	Oui	Oui	30	133.333333	66.6666667	200	66.6666667	15300	104000	52000	14000	3800	3	1382	548684	117666.667	213384	1
Masculin	26	Instruit	Non	Non	25	29	26.5		0	10000	134500	59500		2400	2	1600	640000	285250	69500	0
Masculin	35	Non instruit	Oui	Oui	20	200	100	200	100	18000	104000	52000	16000	4500	2	2250	534000	166875	200250	1
Masculin	37	Non instruit	Oui	Oui	25	200	100	200	100	17500	104000	52000	16000	1700	2	850	507000	196750	113500	1
Masculin	69	Instruit	Oui	Oui	25	200	100	200	100	20000	104000	52000	20000	3400	2	1700	408000	178000	52000	1
Masculin	32	Non instruit	Non	Non	17.5	0	0		0	5000	0	0		2150	2	1700	510000	67100	375800	0
Masculin	33	Instruit	Oui	Non	23.333333	66.6666667	33.333333	100	33.333333	10000	52000	13000	4000	4200	3	1400	420000	91816.6667	144550	1
Masculin	49	Instruit	Non	Non	30	100	50	0	0	15000	60000	30000	0	2000	2	1900	570000	161250	247500	0
Masculin	58	Non instruit	Oui	Non	26.6666667	133.333333	66.6666667	200	66.6666667	12000	104000	52000	16000	3968	3	1587	476160	127333.333	94160	1
Masculin	40	Non instruit	Oui	Non	30	200	100	200	100	12000	104000	52000	16000	3600	2	1800	450000	172000	106000	1
Masculin	30	Non instruit	Oui	Oui	25	200	100	200	100	20000	104000	52000	16000	3450	2	1725	486000	189750	106500	1
Feminin	39	Non instruit	Oui	Oui	25	200	100	200	100	17500	104000	52000	16000	3000	2	1500	448500	204750	39000	1
Masculin	42	Non instruit	Oui	Oui	20	200	100	200	100	14000	104000	52000	14000	2900	2	1450	443344	167000	109344	1
Masculin	58	Non instruit	Non	Non	32	3.8	80	0	0	27000	285000	120000	0	5100	5	1281	1281000	166040	450800	0
Masculin	40	Non instruit	Oui	Oui	20	133.333333	66.6666667	200	66.6666667	12000	104000	52000	16000	3600	3	1200	630000	123616.667	259150	1
Masculin	35	Non instruit	Oui	Non	30	200	100	400	200	12000	104000	52000	4000	2100	2	1050	600000	171300	257400	1
Masculin	56	Instruit	Oui	Oui	25	200	100	300	150	20000	104000	52000	30000	3100	2	1550	360000	163000	34000	1
Masculin	40	Instruit	Oui	Oui	13.333333	133.333333	66.6666667	200	66.6666667	20000	104000	52000	18000	3840	3	1396	424080	95716.6667	136930	1
Masculin	31	Non instruit	Oui	Oui	25	200	100	200	100	20000	104000	52000	16000	2145	2	1073	381810	148000	85810	1
Masculin	55	Non instruit	Non	Oui	22	200	100		0	12100	104000	52000		2300	2	1150	365500	146050	73400	1
Masculin	55	Non instruit	Oui	Non	30	133.333333	66.6666667	200	66.6666667	18000	104000	52000	16000	4000	3	1455	525000	122333.333	158000	1
Masculin	33	Instruit	Non	Non	30	133.333333	50	16.6666667	23000	120000	30000	5000	3200	3	1900	950000	162636.333	462091	0	
Masculin	37	Instruit	Oui	Oui	25	200	100	200	100	25000										

Masculin	59	Instruit	Non	Oui	30	100	0	0	12500	28000	0		500	1	500	87500	96700	0	0	
Masculin	31	Non instruit	Oui	Oui	13.3333333	133.333333	66.6666667	250	83.3333333	20000	104000	52000	22500	3400	3	1236	408000	98998.6667	111004	1
Masculin	35	Non instruit	Oui	Non	15	200	100	200	100	10500	104000	52000	14000	3200	2	1600	514638	174750	165138	1
Masculin	36	Non instruit	Oui	Oui	20	200	100	250	125	20000	104000	52000	22500	3400	2	1700	408000	146550	114900	1
Masculin	34	Instruit	Non	Non	25	0	100	0	5000	0	38000		1500	1	1500	330000	148900	181100	0	
Masculin	23	Instruit	Non	Non	35	25	25	25	0	7000	16150	16000	2700	2	1800	540000	92575	354850	0	
Masculin	35	Instruit	Non	Oui	13.3333333	133.333333	66.6666667	0	16000	104000	52000		2860	3	1144	470899	114733.333	126699	1	
Feminin	45	Instruit	Non	Non	26	100	0	60	30	5700	60000	0	1000	2700	2	1800	540000	89000	362000	0
Masculin	58	Instruit	Non	Non	25	50	25	0	10000	64000	32000		4400	4	1850	1295000	90500	933000	0	
Masculin	37	Instruit	Non	Non	30	200	50	0	10000	61000	16000		1350	1	2180	545000	252000	293000	0	
Masculin	25	Instruit	Non	Non	26.6666667	200	100	0	4500	192000	60000		3600	3	1800	1080000	133333.333	680000	0	
Masculin	49	Instruit	Non	Non	40	50	0	0	10000	29000	0		2400	2	1950	585000	145750	293500	0	
Masculin	46	Non instruit	Oui	Non	25	100	50	100	50	10000	52000	13000	4000	3800	2	1900	384000	128350	127300	1
Masculin	26	Instruit	Non	Non	30	0	100	0	6000	0	28000		1300	1	1040	195000	82500	112500	0	
Masculin	49	Instruit	Non	Oui	20	200	100	0	16000	104000	52000		2780	2	1390	409200	158000	93200	1	
Masculin	50	Instruit	Oui	Oui	12.5	100	50	300	75	20000	104000	52000	30000	3900	4	1114	462000	62750	211000	1
Masculin	35	Instruit	Oui	Oui	25	200	100	250	125	22500	104000	52000	25000	3500	2	1750	420000	124250	171500	1
Masculin	60	Instruit	Oui	Oui	25	200	100	200	100	20000	104000	52000	16000	4800	2	2400	570000	119920	330160	1
Masculin	56	Non instruit	Non	Non	26	150	50	0	5000	43500	14500		1400	1	2800	336000	225498	110502	0	
Masculin	40	Non instruit	Oui	Oui	20	200	100	250	125	20000	104000	52000	22500	3400	2	1700	408000	148690	110620	1
Masculin	35	Non instruit	Oui	Oui	20	200	100	250	125	20000	104000	52000	22500	3500	2	1750	420000	139750	140500	1
Masculin	36	Instruit	Oui	Oui	20	200	100	200	100	16000	104000	52000	16000	3300	2	1650	384000	154500	75000	1
Masculin	30	Instruit	Non	Oui	7.5	100	0	0	15000	112000	0		4400	4	2278	1196000	105451.25	774195	0	
Masculin	44	Instruit	Oui	Oui	20	200	100	200	100	16000	104000	52000	16000	3500	2	1750	420000	154000	112000	1
Masculin	38	Instruit	Oui	Non	30	200	100	200	100	12000	104000	52000	16000	3600	2	1800	432000	150300	131400	1
Masculin	30	Instruit	Oui	Non	22.5	200	100	300	150	18000	104000	52000	30000	2350	2	1175	391000	119200	152600	1
Masculin	36	Non instruit	Oui	Oui	20	200	100	250	125	20000	104000	52000	22500	3500	2	1750	420000	129250	161500	1
Masculin	52	Non instruit	Oui	Oui	20	200	100	200	100	20000	104000	52000	18000	3600	2	1800	432000	133550	164900	1
Masculin	35	Non instruit	Oui	Non	30	200	100	200	200	17500	104000	52000	16000	1600	1	1280	480000	427500	52500	1
Masculin	30	Instruit	Non	Oui	25	200	100	0	18750	26000	26000		3380	2	1690	405600	147875	109850	1	
Masculin	56	Non instruit	Oui	Non	25	200	100	500	250	10000	104000	52000	40000	3400	2	1700	408000	151000	106000	1
Masculin	47	Instruit	Oui	Non	30	200	100	200	100	12000	104000	52000	16000	3600	2	1800	432000	147000	138000	1
Masculin	42	Instruit	Non	Non	32	0	0	35	17.5	9000	0	0	0	2900	2	1750	700000	108543.5	482913	0
Masculin	46	Non instruit	Non	Non	32	212	200	0	0	3500	56000	14000		750	0.25	1974	125000	434000	16500	0
Masculin	32	Instruit	Non	Non	12.5	75	0	0	5000	42000	0		1350	2	675	202500	74500	53500	0	
Masculin	33	Instruit	Non	Non	29.5	150	75	0	9800	84000	42000		2200	2	1100	440000	212050	15900	0	
Masculin	56	Instruit	Non	Oui	19	0	0	0	19000	0	0		2000	2	250	87500	86260	0	0	
Masculin	54	Instruit	Oui	Oui	20	200	100	200	100	14000	104000	52000	16000	3360	2	1680	560000	183750	192500	1
Masculin	42	Non instruit	Oui	Non	22.5	200	100	100	200	9000	104000	52000	16000	2300	2	1150	450000	207680	34640	1
Feminin	21	Non instruit	Oui	Non	16.6666667	133.333333	66.6666667	200	66.6666667	10000	104000	52000	16000	4700	3	1567	450000	121166.667	86500	1
Masculin	47	Non instruit	Oui	Oui	20	133.333333	66.6666667	200	66.6666667	15400	104000	52000	16000	3700	3	1233	432000	107800	108600	1
Feminin	45	Non instruit	Non	Non	25	50	0	0	5000	14000	0		1150	1	1150	172500	91500	81000	0	
Masculin	44	Non instruit	Oui	Oui	20	133.333333	66.6666667	400	133.333333	13500	112000	56000	40000	4000	3	1333	625000	142166.67	198500	1
Masculin	36	Instruit	Non	Oui	8.33333333	1.66666667	25.6666667	0	12500	70000	49000		3600	3	2304	956160	145666.667	519160	0	
Feminin	27	Non instruit	Oui	Oui	16.6666667	133.333333	66.6666667	200	66.6666667	20000	108000	54000	16000	5000	3	1667	600000	152041.667	143875	1
Feminin	68	Non instruit	Non	Oui	15	0	0	0	12500	0	0		250	1	500	43750	100500	0	0	
Masculin	45	Non instruit	Non	Oui	30	0	0	0	15375	0	0		720	1	720	120240	187375	0	0	
Masculin	51	Instruit	Non	Non	25	150	100	0	7000	45000	32000		1650	1	1650	330000	293002	36998	0	
Masculin	23	Non instruit	Non	Non	7.5	0	0	0	2000	0	0		1100	2	550	165000	29500	106000	0	
Masculin	50	Instruit	Oui	Non	22.5	200	100	200	100	15750	104000	52000	16000	3600	2	1800	432000	156375	119250	1
Masculin	48	Instruit	Non	Non	30	200	100	0	12000	104000	56000		2100	2	1050	345765	158000	29765	1	
Feminin	47	Non instruit	Oui	Non	30	133.333333	66.6666667	500	166.6666667	18000	104000	52000	40000	4182	3	1394	570000	103900	258300	1
Masculin	36	Instruit	Non	Oui	10	125	25	0	7000	70000	14000		2900	2	2657	598000	116727	364546	0	
Masculin	55	Non instruit	Oui	Non	21	200	100	350	175	12600	112000	56000	31500	2800	2	1400	500000	200300	99400	1
Masculin	42	Non instruit	Non	Oui	20	0	0	0	13500	0	0		2000	2	1640	656000	108750	438500	0	
Masculin	55	Instruit	Oui	Oui	25	200	100	200	100	20000	104000	52000	16000	3500	2	1750	414000	122040	169920	1
Masculin	56	Non instruit	Oui	Oui	30	200	100	500	250	20000	104000	52000	40000	2000	2	1000	627000	178530	269940	1
Masculin	60	Non instruit	Oui	Non	30	133.333333	66.6666667	400	133.333333	18000	104000	52000	32000	4700	3	1567	600000	108507.333	274478	1
Feminin	40	Non instruit	Oui	Oui	25	200	100	200	100	18750	104000	52000	16000	3100	2	1550	510000	204125	101750	1
Masculin	48	Instruit	Oui	Oui	22.5	200	100	200	100	18000	104000	52000	20000	2400	2	1200	395160	111400	172360	1
Masculin	39	Instruit	Oui	Oui	25	200	100	250	125	20000	104000	52000	25000	2369	2	1185	389108	118100	152908	1
Masculin	38	Instruit	Oui	Non	30	200	100	200	100	12000	104000	52000	160							

Feminin	30	Non instruit	Oui	Oui	18.3333333	133.333333	66.6666667	200	66.6666667	24750	104000	52000	16000	3000	3	1091	373800	78935.6667	136993	1
Masculin	31	Instruit	Oui	Oui	13.3333333	133.333333	66.6666667	200	66.6666667	46000	104000	52000	16000	4300	3	1433	510000	129066.667	122800	1
Feminin	70	Non instruit	Non	Non	20	50	50		0	3500	16500	16500		500	1	1000	107500	73500	34000	0
Masculin	42	Instruit	Oui	Non	25	200	100	450	225	12000	104000	52000	52500	3400	2	1700	595000	209250	176500	0
Masculin	42	Instruit	Oui	Oui	13.3333333	133.333333	66.6666667	200	66.6666667	20000	104000	52000	16000	2680	3	1072	405900	98933.3333	109100	1
Masculin	29	Instruit	Oui	Non	30	200	100	500	500	10500	104000	52000	40000	2000	1	2000	570000	385775	184225	1
Masculin	26	Instruit	Non	Non	25	62.5	25		0	4000	75000	30000		4500	4	1800	1260000	97875	868500	0
Masculin	33	Non instruit	Non	Non	30	100	50		0	14700	28000	14000		1350	1	2000	460000	113700	346300	0
Masculin	52	Non instruit	Oui	Oui	17.5	200	100	400	200	14000	108000	54000	32000	3700	2	1850	450000	132800	184400	1
Masculin	33	Non instruit	Non	Oui	10	0	0		0	3500	0	0		500	1	1000	75000	36000	39000	0
Masculin	48	Non instruit	Oui	Oui	25	200	100	400	200	20000	108000	54000	32000	3600	2	1800	426000	127400	171200	1
Feminin	38	Instruit	Non	Non	40	190	75		0	4500	105000	48000		2850	2	1850	740000	155250	429500	0
Feminin	40	Non instruit	Oui	Non	22.5	200	100	200	100	9000	104000	52000	16000	2635	2	1318	281418	95300	90818	1
Masculin	29	Non instruit	Oui	Non	25	200	100	200	100	12500	104000	52000	16000	3200	2	1600	384000	170250	43500	1
Feminin	38	Instruit	Non	Non	23.2	2.4	12.2		0	20000	168000	17080		5500	5	1920	1296000	99156	800220	0
Masculin	37	Instruit	Non	Non	18.5714286	46.4285714	14.2857143		0	18000	91000	28000		4300	7	637	718100	79364	162552	0
Masculin	32	Non instruit	Oui	Oui	22.5	200	100	200	100	22500	104000	52000	16000	3600	2	1800	456000	207250	41500	1
Masculin	48	Non instruit	Oui	Oui	30	200	100	200	200	20000	108000	54000	16000	1600	1	1600	648000	426000	222000	1
Masculin	50	Non instruit	Oui	Oui	25	200	100	200	100	17500	104000	52000	16000	3300	2	1650	501600	222670	56260	1
Masculin	45	Non instruit	Oui	Oui	25	200	100	400	200	20000	108000	54000	32000	3700	2	1850	666000	207008	251984	1
Feminin	31	Instruit	Non	Non	19	100	25		0	3125	28000	7000		1110	1	1480	150000	65605	84395	0
Masculin	26	Non instruit	Non	Oui	5	0	0		0	2500	0	0		300	1	300	52500	24600	27900	0
Masculin	76	Instruit	Non	Non	30	7.5	0		0	20000	210000	0		2500	2	2400	720000	275500	169000	0
Masculin	58	Instruit	Oui	Oui	25	200	100	200	100	20000	104000	52000	16000	4000	2	1778	486000	168000	150000	1
Feminin	31	Non instruit	Oui	Non	22.5	200	100	200	100	9000	104000	52000	16000	2000	2	1333	500000	220840	58320	1
Masculin	27	Instruit	Oui	Oui	26.6666667	133.333333	66.6666667	200	66.6666667	20000	108000	54000	32000	3650	3	1217	432000	83866.6667	180400	1
Masculin	31	Non instruit	Non	Non	22.5	62.5	37.5		0	9000	40000	24000		2000	2	800	258000	132000	0	0
Masculin	31	Non instruit	Oui	Oui	32.5	200	125	500	250	26000	135000	67500	40000	2500	2	1250	481000	166050	148900	1
Masculin	33	Instruit	Oui	Non	20	200	100	200	100	8000	104000	52000	16000	2150	2	1075	353998	150000	53998	1
Masculin	30	Instruit	Oui	Non	25	100	50	200	50	10000	104000	52000	16000	4900	4	1307	400000	97750	9000	1
Masculin	45	Instruit	Oui	Oui	25	200	100	200	100	20000	108000	54000	16000	3600	2	1800	420000	125400	169200	1
Masculin	34	Instruit	Non	Non	30	25	25	23	23	6000	7500	7500	0	1200	1	200	35000	89700	0	0
Feminin	36	Non instruit	Non	Non	12	2	75		0	2075	49000	21000		1050	1	1400	175000	88875	86125	0
Feminin	38	Instruit	Oui	Non	13.3333333	133.333333	66.6666667	200	66.6666667	8000	104000	52000	16000	4514	3	1505	480000	122500	112500	1
Feminin	59	Non instruit	Non	Non	11	50	0		0	3100	14000	0		1300	1	300	52500	38200	14300	0
Feminin	34	Non instruit	Non	Non	20	0	0		0	6000	0	0		1270	1	270	47250	69700	0	0
Masculin	27	Instruit	Non	Non	30	3	0		0	10000	42000	0		1200	1	520	86000	94500	0	0
Masculin	38	Instruit	Non	Oui	13.3333333	133.333333	66.6666667	0	16000	104000	52000	4300	3	1433	516000	106133.333	197600	1		
Masculin	33	Instruit	Oui	Oui	22.5	200	100	200	100	15750	104000	52000	16000	3500	2	1750	414000	120125	173750	1
Feminin	50	Instruit	Oui	Oui	18.3333333	133.333333	66.6666667	200	66.6666667	24750	104000	52000	16000	4200	3	1400	504000	113583.333	163250	1
Masculin	32	Instruit	Oui	Non	10	100	50	100	50	9000	52000	26000	8000	2100	2	1050	346500	110000	126500	1
Masculin	42	Instruit	Oui	Oui	12.5	100	50	100	50	10000	52000	26000	8000	2200	2	1100	396000	119300	157400	1
Masculin	31	Instruit	Oui	Oui	16.6666667	133.333333	66.6666667	200	66.6666667	20000	104000	52000	20000	4753	3	1584	499680	81000	256680	1
Masculin	45	Instruit	Oui	Oui	25	200	100	200	100	20000	104000	52000	20000	2600	2	1300	369750	158000	53750	1
Masculin	41	Instruit	Oui	Non	30	133.333333	66.6666667	200	66.6666667	18000	104000	52000	16000	3800	3	1267	372000	97333.3333	80000	1
Masculin	28	Instruit	Oui	Oui	10	100	50	100	50	10000	52000	26000	8000	2200	2	1100	264000	114000	36000	1
Masculin	52	Non instruit	Non	Non	6.6666667	66.6666667	33.333333	0	6000	52000	26000		3200	3	1067	396000	86500	136500	1	
Masculin	37	Non instruit	Oui	Non	16.6666667	133.333333	66.6666667	200	66.6666667	13750	104000	52000	16000	3600	3	1200	432000	105916.667	114250	1
Feminin	49	Instruit	Oui	Non	30	200	100	200	100	12000	104000	52000	16000	2600	2	1300	525000	202000	121000	1
Feminin	45	Instruit	Oui	Non	30	200	100	400	400	6000	104000	52000	4000	2000	1	2000	480000	313000	167000	1
Masculin	32	Non instruit	Oui	Oui	26.6666667	133.333333	66.6666667	250	83.3333333	20000	104000	52000	22500	4254	3	1418	474000	99766.6667	174700	1
Masculin	45	Non instruit	Oui	Oui	26.6666667	133.333333	66.6666667	200	66.6666667	20000	104000	52000	18000	3600	3	1200	432000	11326.667	91120	1
Masculin	36	Non instruit	Non	Non	30	200	100	200	100	12000	104000	52000	16000	2600	2	1300	368000	153500	61000	1
Masculin	51	Non instruit	Oui	Oui	25	200	100	200	100	20000	104000	52000	16000	3600	2	1800	432000	156000	120000	1
Masculin	45	Non instruit	Oui	Non	30	200	100	200	100	10500	104000	52000	16000	3600	2	1800	432000	143750	144500	1
Masculin	22	Instruit	Oui	Non	25	200	100	600	300	10000	104000	52000	48000	2800	2	1400	499500	141800	215900	1
Masculin	32	Instruit	Oui	Non	30	133.333333	66.6666667	200	66.6666667	18000	104000	52000	16000	3200	3	1067	560000	125333.333	184000	1
Masculin	27	Instruit	Oui	Oui	25	200	100	200	100	20000	104000	52000	16000	2674	2	1337	488000	158000	172005	1
Masculin	70	Non instruit	Oui	Non	30	200	100	200	100	12000	104000	52000	16000	3637	2	1819	545550	187250	171050	1

Feminin	43	Non instruit	Oui	Oui	25	200	100	200	100	20000	104000	52000	16000	3500	2	1750	486000	220000	46000	1
Masculin	41	Non instruit	Non	Non	16.6666667	0	0	0	0	10000	0	0		3000	3	400	150000	16466.6667	100600	0
Masculin	39	Non instruit	Oui	Oui	25	200	100	200	100	17500	104000	52000	16000	3700	2	1850	564000	246250	71500	1
Masculin	45	Instruit	Oui	Oui	20	200	100	250	125	20000	104000	52000	22500	3600	2	1800	432000	142990	146020	1
Masculin	50	Non instruit	Oui	Oui	25	200	100	200	100	20000	104000	52000	16000	3200	2	1600	594000	246000	102000	1
Masculin	45	Non instruit	Oui	Oui	20	200	100	250	125	20000	104000	52000	22500	3600	2	1800	432000	153970	124060	1
Masculin	54	Non instruit	Non	Non	15	0	0	0	0	4000	0	0		1000	1	1000	79000	28486	50514	0
Masculin	40	Instruit	Oui	Non	16.6666667	133.333333	66.6666667	400	133.333333	8750	104000	52000	4000	3200	3	1067	440000	103208.333	130375	1
Masculin	42	Non instruit	Oui	Oui	25	200	100	200	100	17500	104500	52000	14000	2400	2	1200	482431	181750	118931	1
Feminin	46	Non instruit	Oui	Oui	25	200	100	200	100	20000	104000	52000	16000	3500	2	1750	534000	189750	154500	1
Feminin	41	Non instruit	Oui	Oui	12.5	100	50	200	50	18750	104000	52000	16000	5200	4	1300	480000	100562.5	77750	1
Feminin	46	Instruit	Oui	Non	12.5	100	50	350	87.5	8750	104000	52000	28000	5800	4	1450	480000	78637.5	165450	1
Masculin	34	Instruit	Oui	Oui	25	200	100	200	100	20000	104000	52000	16000	4800	2	2400	576000	164750	246500	1
Masculin	59	Instruit	Oui	Non	30	200	100	200	200	9000	104000	52000	16000	1400	1	1400	450000	363000	87000	1
Masculin	38	Instruit	Non	Oui	20	200	100	0	0	16000	104000	52000		2900	2	1450	477485	148500	180485	1
Masculin	62	Instruit	Oui	Non	25	100	50	100	50	10000	52000	13000	4000	2200	2	1100	228000	43037.5	141925	1
Masculin	39	Instruit	Oui	Non	25	200	100	200	100	10000	104000	52000	16000	2500	2	1250	450000	209200	31600	1
Feminin	48	Non instruit	Non	Non	30	100	50	0	0	11000	28000	14000	0	900	1	1800	180000	146982	33018	0
Feminin	40	Non instruit	Non	Oui	20	100	50	0	0	7000	28000	14000		960	1	1920	160000	79944	80006	0
Masculin	25	Instruit	Non	Non	35	75	50	0	0	6000	45000	34000		2200	2	2100	630000	143250	343500	0
Masculin	62	Instruit	Non	Non	15	50	0	0	3000	14000	0		1226	1	2452	184000	65282	118718	0	
Feminin	37	Non instruit	Oui	Oui	25	200	100	200	100	17500	104000	52000	16000	3500	2	1750	420000	154750	110500	1
Masculin	48	Non instruit	Oui	Oui	14.3333333	133.333333	66.6666667	200	66.6666667	15050	104000	52000	14000	2800	3	1120	469041	109016.667	141991	1
Masculin	46	Instruit	Oui	Oui	25	200	100	500	250	12000	104000	52000	46500	2500	2	1700	629000	227250	174500	0
Masculin	30	Instruit	Oui	Non	30	200	100	200	100	12000	104000	52000	16000	2800	2	1400	450000	176000	98000	1
Masculin	47	Instruit	Oui	Oui	22.5	200	100	200	100	18000	104000	52000	20000	2500	2	1250	300000	142400	16000	1
Masculin	48	Non instruit	Oui	Oui	26	200	100	200	100	18200	104000	52000	14000	2300	2	1150	431340	181850	67640	1
Masculin	36	Instruit	Non	Non	12.5	100	0	0	5000	56000	0		2600	2	1900	570000	120800	328400	0	
Masculin	48	Instruit	Oui	Oui	20	200	100	250	125	20000	104000	52000	22500	3600	2	1800	432000	158250	115500	1
Masculin	54	Instruit	Oui	Oui	16.6666667	133.333333	66.6666667	200	66.6666667	20000	104000	52000	16000	4300	3	1433	510000	114600	166200	1
Masculin	29	Instruit	Oui	Oui	13.3333333	133.333333	66.6666667	200	66.6666667	20000	104000	52000	16000	4300	3	1433	510000	116000	162000	1
Feminin	38	Non instruit	Non	Non	15	50	25	3000	3000	1000	14000	7000		766	1	1532	115000	37985	77015	0
Masculin	24	Instruit	Oui	Non	20	200	100	200	100	7000	104000	52000	16000	2300	2	1150	400000	151672	96656	1
Masculin	33	Non instruit	Oui	Non	10	100	50	100	50	9000	52000	26000	8000	3700	2	1850	360000	56614	246772	1
Masculin	36	Instruit	Oui	Oui	27.5	200	100	200	100	24750	104000	52000	16000	3900	2	1950	462000	170375	121250	1
Masculin	43	Non instruit	Oui	Oui	17.5	200	100	200	100	12250	104000	52000	12250	3000	2	1500	360000	162250	35500	1
Masculin	48	Non instruit	Oui	Oui	17.5	200	100	200	100	12250	104000	52000	14000	3200	2	1600	479819	169125	141569	1
Feminin	41	Instruit	Oui	Oui	22.5	200	100	200	100	22500	104000	52000	16000	3000	2	1500	354000	128489	97022	1
Feminin	40	Non instruit	Non	Non	26	50	25	0	0	16000	14000	7000		1350	1	2900	435000	155504	279496	0
Masculin	35	Non instruit	Non	Non	25	166.666667	0	0	0	15000	15000	0		3300	3	2172	1203750	20166.667	598750	0
Feminin	25	Non instruit	Oui	Oui	20	200	100	250	125	20000	104000	52000	22500	3600	2	1800	432000	164530	102940	1
Masculin	51	Instruit	Oui	Oui	25	200	100	250	125	20000	104000	52000	25000	3250	2	1625	372000	156500	59000	1
Masculin	33	Instruit	Oui	Oui	25	200	100	200	100	17500	104000	52000	16000	4000	2	2000	490000	170150	149700	1
Masculin	35	Non instruit	Oui	Oui	17.5	200	100	200	100	17500	104000	52000	16000	3600	2	1800	507000	169750	167500	1
Masculin	52	Instruit	Oui	Oui	25	200	100	200	100	18750	104000	52000	16000	3500	2	1750	420000	145375	129250	1
Feminin	41	Non instruit	Oui	Oui	25	200	100	200	100	18750	104000	52000	16000	3400	2	1700	450000	189125	71750	1
Masculin	37	Instruit	Oui	Oui	25	200	100	200	100	22500	104000	52000	30000	4200	2	2100	504000	126250	251500	1
Masculin	35	Non instruit	Oui	Oui	25	200	100	200	100	25000	104000	52000	16000	3600	2	1800	576000	181500	213000	1
Masculin	23	Instruit	Oui	Oui	22.5	200	100	250	125	18000	104000	52000	25000	4050	2	2025	461160	121500	218160	1
Masculin	41	Instruit	Oui	Oui	22.5	200	100	200	100	24750	104000	52000	16000	3600	2	1800	492000	208375	75250	1
Feminin	41	Non instruit	Oui	Oui	25	200	100	200	100	20000	104000	52000	16000	3500	2	1750	414000	123250	167500	1
Feminin	27	Instruit	Oui	Oui	25	200	100	200	100	18750	104000	52000	16000	3400	2	1700	558000	220375	117250	1
Masculin	41	Non instruit	Oui	Oui	25	200	100	200	100	17500	104000	52000	16000	3200	2	1600	372000	149750	125000	1
Masculin	37	Non instruit	Oui	Oui	25	200	100	200	100	25000	104000	52000	16000	3300	2	1650	468000	208500	51000	1
Masculin	27	Instruit	Non	Oui	20	200	100	0	0	16000	104000	52000		2970	2	1485	379418	152000	75418	1
Masculin	45	Instruit	Oui	Oui	12.5	100	50	250	62.5	20000	104000	52000	25000	4500	4	1286	504000	61250	259000	1
Masculin	38	Non instruit	Non	Non	25	183.333333	33.3333333	0	0	15000	159500	29000		3000	3	2367	1101000	196382.667	511852	0
Masculin	50	Non instruit	Oui	Non	30	200	100	300	150	12000	112000	56000	30000	4000	2	2000	480000	159000	162000	1
Masculin	38	Non instruit	Oui	Non	25	200	100	200	100	13750	104000	52000	16000	3500	2	1750	436100	165475	105150	1
Masculin	33	Instruit	Oui	Oui	25	200	10													

Masculin	49	Instruit	Oui	Oui	30	200	100	400	400	13500	112000	56000	36000	2300	1	2300	400000	306500	93500	1
Masculin	44	Instruit	Non	Non	30	0	0	0	0	6000	0	0	400	1	400	70000	48450	21550	0	
Masculin	47	Instruit	Non	Non	12	0	0	0	0	2000	0	0	360	1	480	83880	69704	14176	0	
Feminin	35	Non instruit	Oui	Non	10	100	50	200	50	8000	104000	52000	16000	5200	4	1387	750000	130500	228000	1
Masculin	43	Non instruit	Oui	Oui	21	200	100	200	100	14700	104000	52000	16000	3500	2	1750	420000	155850	108300	1
Feminin	34	Instruit	Non	Non	25	150	0	0	0	5000	42000	0	0	1300	1	1300	195000	167500	27500	0
Masculin	45	Instruit	Non	Non	15	50	0	0	0	3000	15000	0	0	620	1	1240	93000	72500	20500	0
Masculin	45	Non instruit	Non	Non	13	0	50	1	0	3200	0	0	600	1	600	105000	73000	32000	0	
Masculin	35	Instruit	Non	Oui	35	0	0	0	0	11500	0	0	450	1	450	78750	67800	10950	0	
Masculin	37	Instruit	Non	Non	27	100	38	1	0	3200	26000	10000	1440	1	1152	335900	162932	172968	0	
Masculin	40	Non instruit	Oui	Non	25	200	100	200	100	10000	104000	52000	16000	3500	2	1750	420000	154000	112000	1
Masculin	48	Instruit	Oui	Oui	22.5	200	100	200	100	15750	104000	52000	14000	2500	2	1429	479075	167875	143325	1
Masculin	31	Instruit	Oui	Oui	16.6666667	133.333333	66.6666667	200	66.6666667	22500	104000	52000	20000	4300	3	1433	510000	70606.6667	281800	1
Masculin	50	Instruit	Oui	Non	25	200	100	400	200	8750	104000	52000	4000	2000	2	1000	370000	132087.5	105825	1
Masculin	49	Instruit	Oui	Non	16.6666667	133.333333	66.6666667	200	66.6666667	12500	104000	52000	16000	5000	3	1667	576000	137500	163500	1
Masculin	46	Instruit	Non	Non	10	100	0	0	0	2750	40000	0	500	1	1000	115000	92950	22050	0	
Masculin	40	Non instruit	Oui	Non	13.3333333	133.333333	66.6666667	200	66.6666667	7000	104000	52000	16000	4000	3	1333	408000	91000	135000	1
Masculin	37	Instruit	Non	Non	22.5	100	50	1	0	9100	54000	28000	2800	12	1600	560000	105978	348044	0	
Feminin	39	Non instruit	Oui	Non	16.6666667	133.333333	66.6666667	200	66.6666667	10000	104000	52000	16000	4500	3	1500	405000	12263.333	37100	1
Masculin	60	Instruit	Oui	Oui	13.3333333	133.333333	66.6666667	400	133.333333	16000	122000	56000	36000	4000	3	1333	500000	149900	50300	1
Masculin	24	Instruit	Oui	Non	25	200	100	250	125	12000	104000	52000	32000	2800	2	1750	480000	193500	93000	0
Masculin	32	Instruit	Non	Non	25	103	50	1	0	5000	74000	14518	1830	1	1830	366000	280018	85982	0	
Masculin	49	Instruit	Oui	Non	30	200	100	400	200	14700	104000	52000	33600	2900	2	1725	414000	166150	81700	0
Masculin	41	Non instruit	Non	Oui	20	200	100	1	0	16000	104000	52000	2800	12	1244	461020	148000	165020	1	
Feminin	30	Instruit	Oui	Non	27.5	200	100	400	200	16500	104000	52000	36000	2800	2	1700	408000	168250	71500	0
Masculin	44	Non instruit	Non	Non	10	100	50	1	0	8000	52000	26000	1900	12	1267	367771	130750	106271	1	
Masculin	46	Non instruit	Non	Non	10	0	0	0	0	2500	0	0	1300	1	600	52500	81900	0	0	
Feminin	40	Non instruit	Non	Non	30	70	50	1	0	6000	22400	16000	1200	1	800	172000	129400	42600	0	
Masculin	37	Instruit	Non	Oui	20	200	100	1	0	16000	104000	52000	2430	2	1215	399128	134000	131128	1	
Feminin	49	Instruit	Oui	Non	22.5	200	100	200	100	9000	104000	52000	16000	3800	2	1900	450000	199400	51200	1
Masculin	42	Instruit	Oui	Oui	35	200	100	200	200	14000	108000	54000	16000	2000	1	2000	329300	234400	94900	1
Masculin	48	Non instruit	Oui	Oui	22	200	100	200	100	15400	104000	52000	16000	3550	2	1775	426000	161200	103600	1
Masculin	38	Instruit	Non	Non	25	70	50	1	0	5000	23100	16500	900	1	900	193500	239600	0	0	
Masculin	42	Non instruit	Non	Non	15	0	100	1	0	6000	0	28000	1350	1	1700	256000	189000	67000	0	
Masculin	26	Instruit	Oui	Oui	25	200	100	200	100	18750	104000	52000	16000	3300	2	1650	384000	155375	73250	1
Masculin	40	Non instruit	Oui	Oui	20	200	100	400	200	12000	112000	56000	36000	2500	2	1250	440000	189250	61500	1
Masculin	48	Non instruit	Non	Non	30	200	100	1	0	6000	112000	56000	1100	1	1100	450000	415000	35000	1	
Masculin	34	Instruit	Non	Oui	21.5	200	100	1	0	12900	112000	56000	2100	2	1200	500000	232950	34100	1	
Masculin	24	Instruit	Non	Oui	20	200	100	1	0	16000	104000	52000	3000	2	1500	360000	146000	68000	1	
Masculin	30	Instruit	Non	Non	30	80	50	1	0	6000	25600	16000	900	1	900	193500	73600	119900	0	
Masculin	60	Instruit	Oui	Oui	13.3333333	133.333333	66.6666667	200	66.6666667	16000	104000	52000	16000	3000	3	1000	52200	125166.667	146500	1
Feminin	33	Non instruit	Non	Non	30	150	100	1	0	4500	42000	28000	1600	1	1600	320000	169887	150113	0	
Masculin	25	Non instruit	Oui	Non	30	200	100	200	100	12000	104000	52000	16000	3700	2	1850	525000	191000	143000	1
Masculin	42	Instruit	Oui	Non	16.6666667	133.333333	66.6666667	200	66.6666667	10000	104000	52000	16000	4281	3	1427	400000	127166.667	18500	1
Masculin	43	Instruit	Non	Non	10	0	50	1	0	2000	55000	14000	1350	1	600	52500	150700	0	0	
Feminin	28	Non instruit	Non	Non	37	50	25	1	0	5800	14000	7000	1300	1	400	60000	94150	0	0	
Masculin	42	Instruit	Oui	Oui	16.6666667	133.333333	66.6666667	300	100	22500	104000	52000	30000	5000	3	1667	576000	83833.33333	324500	1
Feminin	35	Non instruit	Oui	Non	30	50	50	400	200	12000	26000	32000	2000	12	1000	240000	48000	144000	1	
Masculin	29	Non instruit	Oui	Oui	25	200	100	350	175	25000	104000	52000	16000	3400	2	1700	582000	188500	205000	1
Masculin	45	Instruit	Oui	Oui	22.5	200	100	200	100	22500	104000	52000	16000	2950	2	1475	414005	149250	115505	1
Masculin	52	Non instruit	Oui	Oui	25	200	100	200	100	20000	104000	52000	16000	3400	2	1700	629000	258500	112000	1
Masculin	51	Non instruit	Oui	Oui	25	200	100	200	100	18750	104000	52000	16000	2000	2	1000	462000	185375	91250	1
Masculin	56	Non instruit	Oui	Oui	25	200	100	300	150	20000	104000	52000	30000	3700	2	1850	432000	183000	66000	1
Masculin	48	Non instruit	Non	Non	30	0	0	0	0	10000	0	0	1000	1	1000	150000	98200	51800	0	
Masculin	36	Instruit	Non	Non	20	150	0	0	0	4000	43500	0	900	1	900	135000	125000	10000	0	
Masculin	52	Non instruit	Oui	Oui	16.6666667	133.333333	66.6666667	200	66.6666667	20000	104000	52000	16000	3000	3	1000	510000	125500	133500	1
Masculin	30	Non instruit	Oui	Oui	16.6666667	133.333333	66.6666667	200	66.6666667	27500	104000	52000	16000	3300	3	1100	480000	139833.333	66500	1
Masculin	20	Non instruit	Oui	Non	11.25	100	50	200	50	9000	104000	52000	16000	4100	4	1025	400000	91000	36000	1
Masculin	50	Instruit	Oui	Non	12.5	200	100	200	100	8750	104000	52000	16000	3500	2	1750	400000	180375	39250	1
Feminin	38	Instruit	Non	Oui	20	0	0	0	0	14000	0	0	1100	1	500	43750	33100	10650	0	
Masculin	49	Non instruit	Oui	Non	25	200	100	400	200	15000	112000	56000	40000	2000	2	1000	500000	136700	226600	1
Masculin	42	Instruit	Non	Non	13	0														