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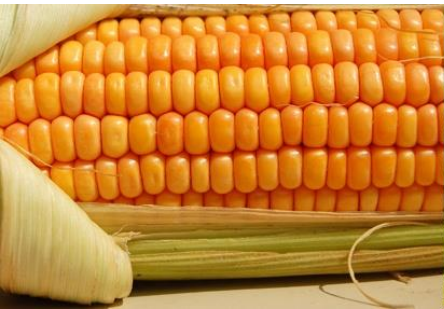
# ASSESSMENT OF FACTORS AFFECTING THE PARTICIPATION OF SMALLHOLDER FARMERS IN AGRO- PROCESSING INDUSTRIES OF GAUTENG PROVINCE: A PRELIMINARY INVESTIGATION

Presentation at NAMC Seminar

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# Presentation Outline

- Introduction
- Theoretical Framework
- Research Methods
- Results and discussions
- Conclusions

# Introduction

The concept participation differs by numerous experts (Pope 2014).

Broadly participation defines various activities such as: involvement; contractual, consultative, collaborative, collegial; farmer- or community-initiated interactions (Biggs, 1989, Lilja et al., 2000).

In South Africa, smallholder farmers were known to have a limited scope of participating in the agro-processing sector.

According to Sharma (2016), smallholder farming participation in the global value chains, is perceived as of prime importance for their inclusion in the agricultural development in the developing countries.

In addition, smallholder farmers are known across the globe for participating in the agro-food markets through local collector traders (Natawidjaja et al., 2014).

Vorley et al., (2012) pointed out that smallholder farmers seems to be linked with the markets through informal transactions and small traders.

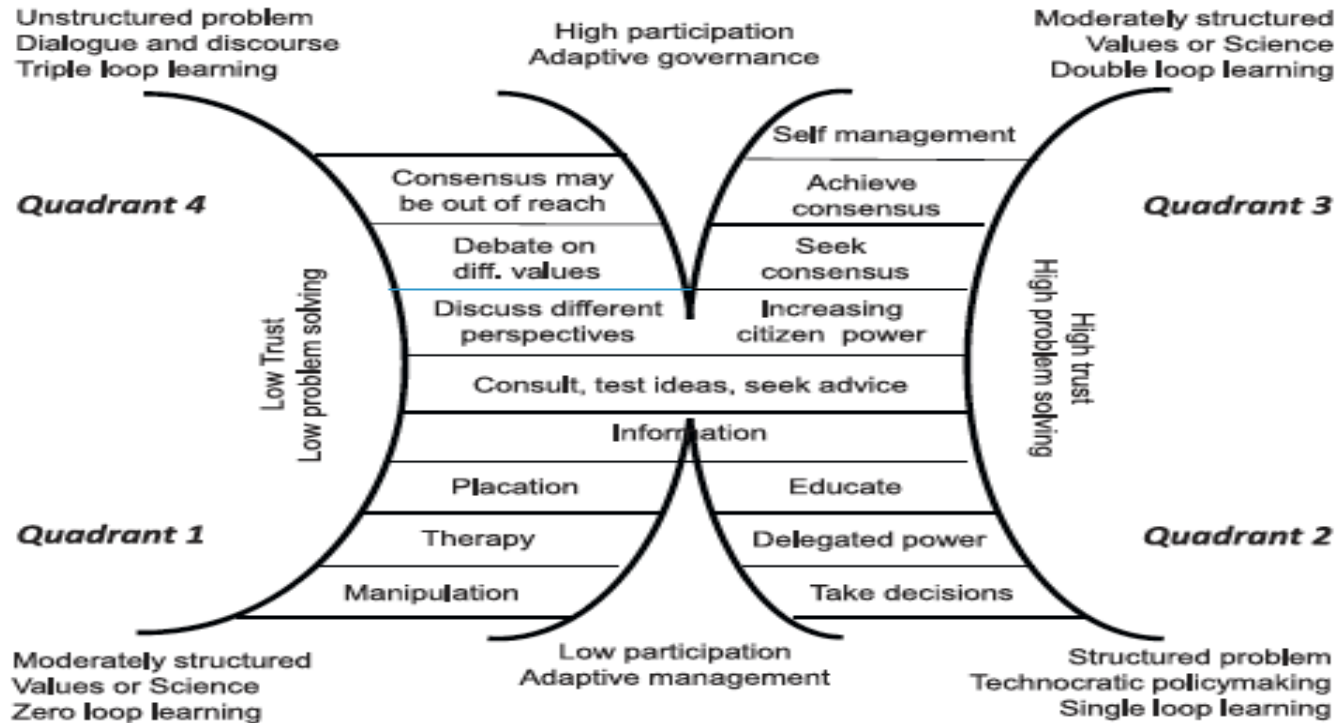
This practice is common because smallholder farmers appear to have no economies of scale that entice larger traders (Natawidjaja et al., 2014). Challenging the unequal local power relations which has a historical connotations.

# Theoretical Framework

**Table 1: Typologies of participation (Source: Reed, 2008)**

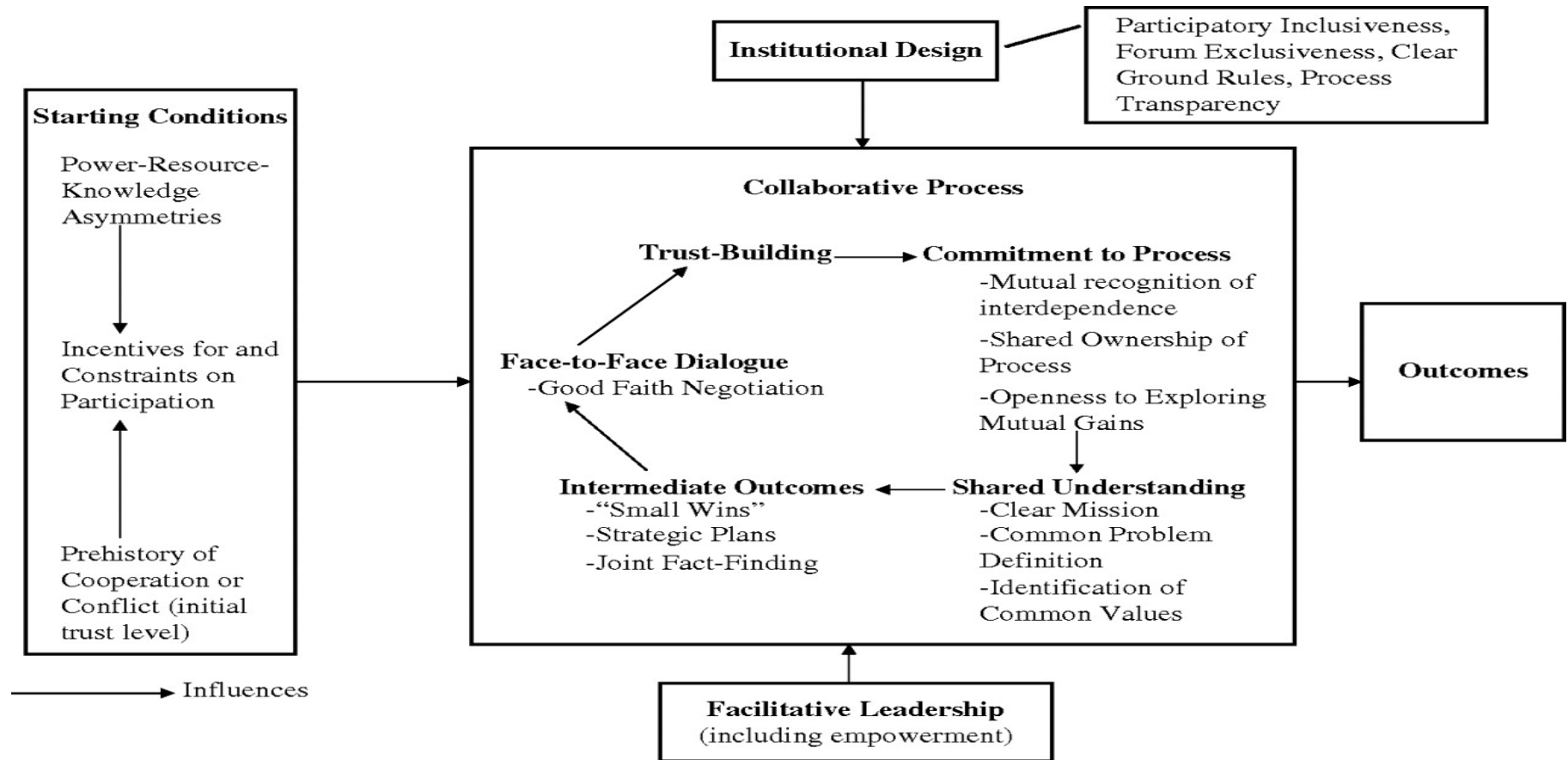
BASIS OF TYPOLOGY	REFERENCES
1. Typology based on different degrees of participation on a continuum. Numerous alternative terms suggested for different rungs of the ladder (e.g. Biggs, 1989; Pretty, 1995a,b; Farrington, 1998; Goetz and Gaventa, 2001; Lawrence, 2006)	Arnstein's (1969) ladder of participation. Sometimes presented as a wheel of participation Davidson (1998)
2. Typology based on nature of participation according to the direction of communication flows	Rowe and Frewer (2000)
3. Typology based on theoretical basis, essentially distinguishing between normative and/or pragmatic participation	Thomas (1993), Beierle (2002)
4. Typology based on the objectives for which participation is used	Okali et al. (1994), Michener (1998), Warner (1997), Lynam et al. (2007), Tippet et al. (2007)

# Quality of participation



**Figure 1: Split of low and high level of participation (Hurlbert & Gupta 2015).**

# Benefit and constraints of participation



**Figure 2: The model for collaborative governance (Source: Ansell and Gash 2008)**

# PROBLEM STATEMENT

There is lack of evidence to show that smallholder farmers in Gauteng province are the participating in agro-processing. This lack of information, makes it difficult to find out at what level these farmers are participating. Without knowing the level of participation, it could be difficult for the policy makers to provide a support and let alone the challenges that constrain their participation. Hence, it maybe difficulty to monitor and evaluate the economic impact of the smallholder farming participation in agro-processing in Gauteng province. The lack of participation could mean that smallholder farmers could not have chances to create jobs at the agro-processing level. If this assumption holds, this may imply that transformation is not precipitating in the agro-processing sphere and this is a bad scenario for agriculture in Gauteng province. If the above assumption does not hold, it may imply the numerical supremacy of smallholder farming in the rural and peri-urban farming could translated into economic benefits of the rural and peri-urban citizen. This hypothetical involvement in agro-processing sector could potential reduce emigration of rural expertise to urban centres.

# RESEARCH QUESTIONS

- What indicators constitute participation construct in the agro-processing sector?
- Which of those indicators are important and least important in measuring the participation?
- Are there relationship between the indicators and participation?
- What impact does each indicator have to participation construct?



# AIMS & OBJECTIVES

- The aim of the study was to assess the factors that influence participation of smallholder farmers in Gauteng province.
- The objective was to determine the extent of their influence and the relationship amongst the factors under consideration.

# RESEARCH METHOD

- Location : Three regions of Gauteng
- Research design:
  - ✓ Type: Cross-sectional study.
  - ✓ Sampling: Purposive :stakeholder analysis(Palys 2008), Sample size (N=109)
- Methodology: Qualitative and quantitative

# Statistical analysis

- Null hypothesis is:  $H_0: \alpha = 0, \beta_1 = 0$  and  $\beta_{ij}=0$ 
  - Alternative hypothesis:  $H_a$ : At least one coefficient is different from zero.

# Model specification

$$Y_1 = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_{ij} + e$$

Where:

$Y_1$  = Participation,  $\alpha$  = constant,  $e$  = residual (error term),  $X_1$  = Supplypr\_DSPPAP,

$X_2$  = Indf\_DSAIF,  $X_3$  = Supplya\_DFSPTAF,  $X_4$  = Bianual\_DFSMTY,  $X_5$  = Natint\_DFHNAGP,  $X_6$  = Linkagebs\_DHWBP

# RESULTS AND DISCUSSIONS

**Table 1: The descriptive analysis of the smallholder farmers' participation variables**

Indicators	Descriptions	N	Mean	De
C.1.1DFSPLS	Do your farmers supply your product to local small agro-processor?	109	3.4587	
C.1.2DFOAPF	Do your farmers have their own agro-processing facility?	109	3.6514	
C.1.3DFSPAC	Do your farmers send their product to agro-processors as a co-operative?	109	3.6239	
C.1.4DFSAPPOY	Do your farmers send their product to agro-processors once a year?	109	3.6881	
C.1.5DFSPTAF	Do your farmers send their product to agro-processor through another farmer?	109	3.7431	
C2.1DSPPAP	Do your farmers send their products to the provincial agro-processor?	109	3.5963	
C2.2DHWBP	Do your farmers have a link with big agro-processor?	109	3.5321	
C2.3DSAIF	Do your send their product to agro-processor as an individual farmer?	109	3.6055	
C2.4DFSMTY	Do your farmers send their product more than twice a year?	109	3.6239	
C3.1DPNAGP	Do your send their product to the national agro-processor?	109	3.6697	
C3.2DFHNAGP	Do your farmers have a link with national and international agro-processor	109	3.7523	
C3.3DYSAGP	Do you send their product to agro-processor through marketing agents?	109	3.6055	
C3.4DYSEM	Do you send their product to export market?	109	3.6514	
C3.5DYFDA	Do your farmers have distribution agents?	109	3.5138	



**Table 2: The descriptive analysis of the smallholder farmers' participation variables**

Indicators	Descriptions	N	Mean	De
C.1.5DFSPTAF	Do your farmers send their product to agro-processor through another farmer?	109	3.7431	
C2.1DSPPAP	Do your farmers send their products to the provincial agro-processor?	109	3.5963	
C2.2DHWBP	Do your farmers have a link with big agro-processor?	109	3.5321	
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C3.2DFHNAGP	Do your farmers have a link with national and international agro-processor	109	3.7523	
C3.5DYFDA	Do your farmers have distribution agents?	109	3.5138	

**Table 3: The correlation coefficient estimates of factors that determine participation of smallholder farmers in agro-processing industries**

	supply~p	supply~f	linkag~p	indf_c~f	bianua~y	natint~p	hada_c~a
supplypr_c~p	1.0000						
supplya_c1~f	0.7283*	1.0000					
linkagebs_~p	0.8254*	0.6740*	1.0000				
indf_c23ds~f	0.6394*	0.6164*	0.6299*	1.0000			
bianual_c2~y	0.7176*	0.5267*	0.6318*	0.7130*	1.0000		
natint_c32~p	0.7571*	0.7287*	0.6941*	0.6305*	0.6591*	1.0000	
hada_c35dy~a	0.6857*	0.5449*	0.7700*	0.5533*	0.6240*	0.7185*	1.0000



# Quantile regression analysis of factors that affect participation

Participation	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
Supplypr_DSPPAP	.3474116	.0097048	35.80	0.000	.3281621	.3666611
Indf_DSAIF	.1478194	.006593	22.42	0.000	.1347422	.1608966
Supplya_DFSPTAF	.2136201	.0075071	28.46	0.000	.1987297	.2285104
Bianual_DFSMTY	.1883217	.0068898	27.33	0.000	.1746558	.2019876
Natint_DFHNAGP	.018178	.0080168	2.27	0.025	.0022767	.0340793
Linkagebs_ DHWBP	.0202025	.0073512	2.75	0.007	.0056215	.0347836
Cons	-3.390877	.0196473	-172.59	0.000	-3.429847	-3.351906

# Impact of the indicators on the participation

Variable	Partial Corr.	Semi-Partial Corr.	Partial Corr.^2	Semi-partial Corr.^2	p-Value
Supplypr_DSPP AP	0.6088	0.2332	0.3706	0.0544	0.0000
Linkagebs_DHWBP	0.1028	0.0314	0.0106	0.0010	0.2991
Indf_DSAIF	0.5342	0.1921	0.2854	0.0369	0.0000
Bianual_FSMTY	0.2244	0.0700	0.0504	0.0049	0.0220
Natint_DFHNAGP	0.2824	0.0895	0.0798	0.0080	0.0037
Hada_DYFDA	-0.1445	-0.0444	0.0209	0.0020	0.1433

# Conclusion

- The positive significant impact of all indicators
- All indicators that attest to social capital seems to have a huge impact.
- On the basis of the above-mentioned recommendations, it is therefore recommended that more investment on participation is required.
- Monitoring and evaluation of such is need.

# Thank You

