

FAULTLINES: APPLYING THE RICHNESS TO NAMIBIAN TOP MANAGEMENT TEAM DIVERSITY DEMOGRAPHICS

¹Albert Isaacs, ²Marius F. Johannes, ³Sitali Brian Lwendo.

¹University of Namibia, Windhoek, Namibia

²Dundee Precious Metals, Tsumeb, Namibia

³University of Namibia, Windhoek, Namibia

Abstract: Group composition and the effectiveness of organizational teams are an integral part of organisations. Managing of faultlines like diversity management will increase the trends that seem unlikely to change are that employees increasingly work in teams, typically cross-functional or project teams, and with people demographically work with. Extending the theory on faultlines we argue that faultlines splitting a team into homogeneous subgroups can have different effects on team members' individual performance, depending on different intra-subgroup processes. For this the Namibian top management team (TMT) data, will attempt to form a case for incorporating faultline algorithms for practical team analysis. The Namibian results reflect that strong demographic faultline subgroups matter for the documented and surveyed teams. While the strong demographic subgroups increased the faultlines seems to get weaker, but the number of subgroups seems to be unaffected. Nevertheless, the measure that measure faultlines and subgroups mimic each other and clearly measure the same subgroup size. Our focus on subgroups as an element of team composition also enables us to make a fresh contribution to the large body of literature that addresses team heterogeneity.

Keywords: Top Management team diversity, faultline, faultline computations, and subgroups.

I. INTRODUCTION

Namibia, like in Africa, top management team diversity (TMTD) demographic research, are limited, but internationally have pointed out that the exploration and the management of faultlines could aid in the understanding and influence of performance of TMT's, to an extent, even though results are mixed (Boerner, Linkohr, & Kiefer, 2011; Carpenter, 2002). However, TMTD research has received criticism for only looking at diversity from one dimension, which potentially causes researchers to overlook the combined and interactive effects of multiple dimensions of diversity (Blau, 1977; Dawson, 2011; Harrison & Klein, 2007; Solanas, Selvam, Navarro, & Leiva, 2012). Namibia is no different as our works are limited to affirmative action. Wax's (2013) suggested that that one possible explanation for the lack of findings in TMTD "(is) research has largely taken an absolute diversity rather than a relative perspective of what pattern of diversity should be" (p.6).

To further explore the description of TMTD demographic and team characteristics, Lau and Murnighan (1998) introduced the concept of faultlines as an important addition to our view of how diversity affects group processes and performance. Lau and Murnighan described "Faultlines as hypothetical dividing lines that may split a (team) into subgroups based on one or more attributes" (1998, p. 328). Shaw (2004) noted that it is important that faultline concept and measure should not be viewed to make redundant the common measures of diversity, already discussed, but aid in the and exploration of TMTD interpretation in Namibia.

If we could apply the faultline models and managed properly, the researcher believe this method could further increase the productivity of everyone in a diverse workplace such as Namibia, where we are limited to look through the eyes of visible

diversity. Even though all the above researchers admit it is a very fine line to walk, the potential for future study and exploration is promising. The researcher will apply these internationally recognised computational models against each to provide an overview of their potential and interpret and make recommendations within the Namibian context.

Identification of a Problem: Faultlines the theoretical roots and shortcomings.

Managers need to explain the value of diversity, especially for more complex tasks, pointing out how task performance can benefit from it. Namibia has the potential for increasing their cultural diversity beyond the identity of affirmative action variables to a variety of insights and skills enhances for team decision making while at the same time a belief in a moral imperative of fairness and equal opportunity can promote intra-team communication

Faultiness have an established theoretical foundation which are based on the self-categorization theory (Van Knippenberg, Dawson, West, & Homan, 2011), social identity theory (Williams & O'Reilly, 1998), and the similarity-attraction theory (Wei & Wu, 2013), which provide the theoretical underpinnings for understanding the formation of demographic faultlines. The interaction of these theories provided the melting pot and solid science where individuals classify themselves and others into categories on the basis of demographic attributes and acquired skills (Van Knippenberg, Dawson, West, & Homan, 2011), and upon these classification to simplify a complex environment such as the workplace, so that predictions might be made about future interactions (Williams & O'Reilly, 1998), so that an individual's social identity (Wei & Wu, 2013) is created as a result of these classifications (Thatcher & Patel, 2011).

A number of researchers have tested the faultline model, in demographic diversity in research topics such as, factional groups (Li & Hambrick, 2005), team task autonomy (Rico, Molleman, Sánchez-Manzanares, & Van der Vegt, 2007), social and informational arrangements (Wax, 2013), creativity (Nishii & Goncalo, 2008), and conflict (Van der Kamp, Tjemkes, & Jehn, 2011), with progressive results in the application of the model, and also the integration of the sub-groups formation on employee performance (Meyer, Shemla, Li, & Wegge, 2015). This expansion in research could aid Namibian researchers and improvement practitioners, to expand the faultline characteristics further in Namibia to additional deeper-level attributes such as personality, attitudes and educational background. (Lau & Murnighan, 1998; Nishii & Goncalo, 2008). Because complex and innovative tasks are usually delegated to TMT's for we elaborate the conditions under which belonging to a specific subgroup attenuates or amplifies the consequences of faultline strength on individual performance. Because Namibian subgroups are similar across the faultline patterns its assumed to have a strong impact on their members: they shape their members' identities, and this provides the opportunity to identify between dormant faultlines, and active faultlines, "where active faultlines describe a situation where the faultline is actually perceived by group members" (p.8). This distinction "is similar to that made in the diversity literature between objective diversity and perceived diversity" (Thatcher & Patel, 2012, p. 982).

Even though there are criticism within the 'faultline community', Nishii and Goncalo (2008) expressed the concern that too often there is a gap, between academic research and practicing managers, while Li and Hambrick (2005) have invoked the concept in qualitative studies. The lack of the measurement and application of faultlines, over time (Gibson & Vermeulen, 2003), along informational faultlines (Wax, 2013), qualitative investigation based on faultline findings (Meyer & Glenz, 2013), project teams (Lau & Murnighan, 2005), moderators that mitigate negative effects (Thatcher & Patel, 2011), and the use of relevant team data and not archival data (Bezrukova, Jehn, Zanutto, & Thatcher, 2009), has been relatively limited. Considering the limitations, the researcher will attempt to close a gap in the real-life management application of faultiness theory to management science, and the difficulty to accept these findings within Namibia, as a method to increase management of diversity.

This will be achieved by partially combining survey and archival data to make an informed argument for further faultline studies through empirically testing and provide sound theoretical discussions on the different types of faultiness and interpretation within Namibia.

II. METHODOLOGY

The population consisted of a non-probability sample 500 random Namibian companies from various industries and registered organizations and business in Namibia, with the exclusion of the public sector. This resulted in 29 surveyed teams, with a response rate of above 75% for the individual team, selected, with 133 top managers participating. The reduced number of observations supplemented from a document search of 228 teams selected, with 1873 participants in total, which will only be used during the faultline calculation.

It is not until Thatcher and Patel (2011) meta-analysis, that found that the majority of previous research on faultlines focused on social and demographic faultlines, because they are readily detectable, which bear a resemblance to diversity indexes (Hambrick & Mason, 1984). Meyer and Glenz (2013) compared eight available faultline measures Bezrukova's et al. (2009) faultline distance; Gibson and Vermeulen's, (2003) subgroup strength; Lawrence and Zyphur (2011), latent clustering; Li and Hambrick's (2005), factional faultlines; Shaw's, (2004) faultline strength (FLS); Thatcher, Jehn, and Zanutto's, (2003) Fau; Trezzini's, (2008) Index of polarized multi-dimensional diversity; van Knippenberg, Dawson, West, & Homan (2011), multiple linear regressions based on 100 simulated teams, adding their own average silhouette width (ASW) clustering procedure.

This guideline in Figure 1 will be applied in this research, during the selection and comparison of the appropriate index.

The empirical approaches to measuring Namibian faultlines had broadly focused on two aspects, faultline strength that captures how many demographic attributes align within a group (Lau & Murnighan, 2005) or, in other words, how cleanly a group may split into two homogeneous subgroups emphasis on similarities, and faultline distance which also derives from distance theory posits that team members in one subgroup will experience psychological distance from the members of other subgroups (Meyer & Glenz, 2013). This reflects the extent to which subgroups diverge as a result of accumulated differences across aligned subgroups, with the emphasis on differences (Thatcher & Patel, 2012; Zanutto, Bezrukova, & Jehn, 2011). Even though Meyer and Glenz (2013) it can be concluded that the ASW algorithm is the most versatile, accurately detection is not the primary scheme of the study but to globally investigate which team member belonged to which subgroup and the subgroup size. Figure 1, represent the decision tree for choosing a set of suitable faultline measure for a given research context based on the comparisons by Meyer and Glenz (2013) and the computational comparison between ASW and the subgroup algorithm. Regardless of the yes/no choice, the final set of possible measures always includes the ASW algorithm (Meyer, Glenz, Antino, Rico, & González-Romá, 2014).

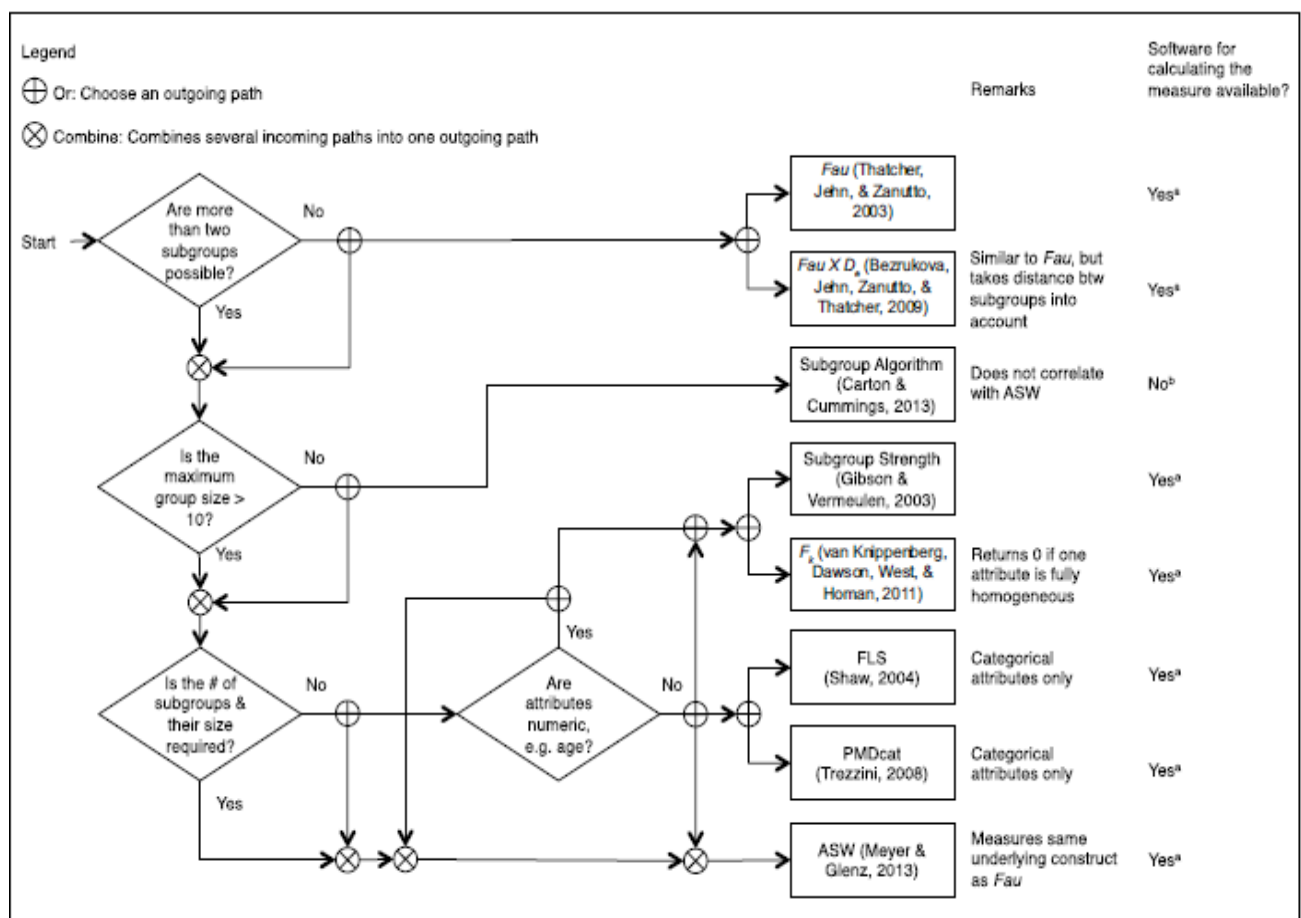


Figure 1: Decision tree for suitable faultline

Source: Meyer, Glenz, Antino, Rico and González-Romá (2014)

For application in Namibia the faultlines approach could be more appropriate than traditional measures of diversity since it analyses the effects of demographic characteristics in combination rather than in isolation of each other (Lau & Murnighan, 1998; Nishii & Goncalo, 2008). Lau and Murnighan (1998) made it clear, "That the impact of diversity within a team is only partially captured by these common dispersion measures. They note that analysts may best conceptualise group composition by considering all of the potential dynamics that group members' attributes can activate," (p. 327). Groups that encompass an identical array of demographic attributes can still have markedly different dynamics if those characteristics are distributed differently among the individuals in the group.

In the following section, we briefly summarise the available faultline measures with regard to their adherence to the propositions and, based on this review.

Table 1: Overview of faultline measures applicable for this study

Faultline	Author(s)	Description	Formula
Thatcher's Fau	(Thatcher, Jehn, & Zanutto, 2003)	Based on the portion of the total variance explained by the subgroup membership. This variance-based approach quantifies a split as the two-subgroup configuration delivering the largest ratio of between group variance over the total group variance of attributes.	$Fau_g = \left(\frac{\sum_{j=1}^p \sum_{k=1}^p n_k^g (\bar{x}_{.jk} - \bar{x}_{.j})^2}{\sum_{j=1}^p \sum_{k=1}^p \sum_{i=1}^n (\bar{x}_{.ijk} - \bar{x}_{.j})^2} \right)$
Subgroup strength	(Gibson & Vermeulen, 2003)	Quantifies the degree to which attributes overlap between the dyads that can be formed between all members of a team.	$Subgroup\ strength = SD \left(\sum_k overlap\ X_{k,i,j} \right)$
Shaws FLS	(Shaw, 2004)	Reflects the extent to which categorical attributes are aligned within subgroups and deviate between subgroups.	$FLS = IA \times (1 - CGAI)$
Faultline distances	(Bezrukova, Jehn, Zanutto, & Thatcher, 2009)	A faultline measure that reflect not only the extent of attribute alignments across group members but also the distance between the emerging subgroups, after the strongest faultline has been detected.	$D_e(X, Y) = \sqrt{(x_i - y_i)^2}$
Average silhouette width fault line clustering (ASW)	(Thatcher, Jehn, & Zanutto, 2003)	A cluster analysis for detecting the subgroup split associated with the group's strongest faultline for groups with more than two homogeneous subgroups.	$s(i) = \frac{b_i - a_i}{\max(a_i, b_i)}$

Source: Compiled by author and adapted from Meyer and Glenz (2013) and Meyer, Glenz, Antino, Rico and González-Romá (2014)

Interpretation and articulation of the results:

Table 2, represent the reduced number of observation results, and corresponding faultline calculations with the independent demographic variables, and resulted in 29 surveyed teams selected, with 133 top managers participating, the sample was supplemented from a document search of 228 teams selected, with 1873 participants in total, which will only be used during the faultline calculation. Lower team calculations, in the case of Gibson, are results of the computation that could not calculate the team demographic or team size variables. This was identified as a limitation of the computation.

Table 2: Faultline computational summaries

							Skewness		Kurtosis	
		N	Min	Max	M	SD	Statistic	Std. Error	Statistic	Std. Error
Team size	Team size	257	2	99	7.288	10.761	5.327	.152	34.789	.303
Gender and nationality, (Demo_2)	ASW	230	.000	1	.558	.415	-.448	.160	-1.534	.320
	Gibson	190	.000	1.155	.483	.259	-.736	.176	.404	.351
	LCCA	230	2	99	7.574	11.333	5.028	.160	30.902	.320
	Shaw	230	.000	1	.093	.144	2.208	.160	7.029	.320
Gender, nationality and age, (Demo_3)	ASW	29	.000	.855	.531	.207	-1.056	.434	1.303	.845
	Thatcher	29	.000	.993	.787	.238	-2.648	.434	7.324	.845
	Bezrukova	29	.000	21.356	10.253	4.913	.024	.434	.377	.845
	Gibson	29	.000	1.274	.494	.280	.003	.434	1.121	.845
Gender, nationality, education discipline, education level, and functionality, (Demo_all)	ASW	29	.000	.825	.513	.199	-1.082	.434	1.327	.845
	Thatcher	29	.000	.987	.777	.236	-2.621	.434	7.190	.845
	Bezrukova	29	.000	21.292	10.177	4.909	.040	.434	.358	.845
	LCCA	29	1.000	8	4.586	1.680	-.160	.434	.078	.845
	Gibson	27	.102	2.128	.953	.476	.768	.448	.789	.872

Source: Author

From Table 2, and Table 3 (histograms not included due to space), firstly, all variables were checked to ensure that the observed distributions are reasonably normal. A visual analysis of a histogram or frequency distribution was carried out for each demographically clustered data sets, namely faultline calculation, of which can be seen in Table 3, below. This also provide a visual comparison on how the faultline compare to each other, under the various independent variable grouping conditions. Visually AWS for gender and nationality displayed a platykurtic curve, Gibson a mesokurtic curve and LCAA are leptokurtic.

From Table 2, above, statistically the higher values, for $LCCA_{Demo_2}$ (Skewness = 5.028, Kurtosis = 30.902), $Shaw_{Demo_2}$ (Skewness = 2.208, Kurtosis = 7.029), AWS_{Demo_3} (Skewness = -1.056, Kurtosis = 1.303), $Thatcher_{Demo_3}$ (Skewness = -2.648, Kurtosis = 7.324), AWS_{Demo_all} (Skewness = -1.082, Kurtosis = 1.327) $Thatcher_{Demo_all}$ (Skewness = -2.621, Kurtosis = 7.190) deviation of the underlying distribution of the sample from a symmetric distribution, could be questionable on the quality of the faultline instrument, but, on a closer review, especially when the size of a dataset that is small; The true skewness or true kurtosis for the sample data, standard error of skewness (SES) are well below .512 and standard error of kurtosis (SEK) are well below .922, which are considered a better quality measure for the researcher in small sample and team research. Overall, all the distribution seemed to mimic each other under the various conditions, which proof that the faultline calculations measured the same thing.

Visually this also seem to be the same case, as the curves under the various condition almost seem to have the identical bell shape, when more than two variables teams faultlines are calculated, except in the case of Thatcher.

To check homogeneity the researcher conducted and independent Levenes test for homogeneity of variance, it's probably safe to assume that the variances are homogenous across groups for gender and nationality only. The researcher then continued found various classifications on how faultlines should be reported, based on the maximum number of attributes that are aligned. The researcher will measure faultline measure taking into account cumulative proportions of variance across demographic variables (Bezrukova, Jehn, Zanutto, & Thatcher, 2009). Faultline strength can take on values between 0 and 1, with larger values indicating greater strength. The researcher decided to create percentile categories to aid in the discussion and classification of Namibian faultline categories.

Subgroups:

Extending the Namibian context on the theory on faultlines, Meyer, Shemla, Li and Wegge (2015) the split in subgroups into homogeneous subgroups can have different effects on team members' individual performance, depending on different intra-subgroup processes. The results from Table 5 descriptive analysis confirm and reflect that strong demographic

faultline subgroups matter for the documented and surveyed teams. Strong demographic subgroups could lead to increases in relationship and task conflict and decreases in team cohesion, team performance, and team satisfaction. Even though as the faultline variables increased the faultlines seems to get weaker, but the number of subgroups seems to be unaffected. Nevertheless, the measures confirm and subgroups mimic each other.

While the evenness of subgroup sizes turned out to exacerbate the negative effects of faultline strength an increasing number of subgroups decreased it. (Thatcher & Patel, 2011), this was not found in the current Namibian data which makes the argument unique to the Namibian context.

Namibian TMT have a strong tendency towards shared identity which can lead to a high 'degree of interdependence' among the members of a homogeneous identity-based subgroup. This proposition is in line with social network conceptualizations of faultlines and subgroups that suggest that the members of a homogeneous subgroup develop stronger network ties with each other than with team members from other subgroups. These strong ties are known to be the channels through which information, advice, and social support propagate. If subgroup members form close ties on the basis of their identities, we deem it likely that the heterogeneous resources and experiences of the members of the identity-based subgroup are exchanged more freely within the subgroup than with members of a different subgroup

Table 3: Descriptive faultline subgroups

	N	Minimum	Maximum	Mean	Std. Deviation
<i>AWS_{Demo 2}</i>	230	1	4	1.934	.660
<i>AWS_{Demo 3}</i>	29	1	3	1.965	.325
<i>AWS_{Demo all}</i>	29	1	3	1.965	.325
<i>Thatcher_{Demo 3}</i>	29	1	2	1.931	.257
<i>Thatcher_{Demo all}</i>	29	1	2	1.931	.257
<i>Bezrukova_{Demo 3}</i>	29	1	2	1.931	.257
<i>Bezrukova_{Demo all}</i>	29	1	2	1.931	.257
Valid N (list wise)	29				

Source: Author

Correlation:

This multitude of measures could make it difficult for Namibian researchers and diversity practitioners to choose the appropriate measure for their studies and application (Meyer & Glenz, 2013). The different measures also make it difficult to compare findings across studies, because they are calculated differently and have different numeric properties. To provide a comparative overview of the different faultline measure and potential categorization of faultlines in Namibia. We expressed the faultline strength by comparing the correlation analysis of the different parameters that varies to correspond to the demographic attributes. The AWS model proofed to be the most versatile in this research and correspond with Meyer and Glenz (2013), having a significant strong correlation in with Gibson, $r(190) = .791, p < .000$, moderate with LCCA $r(230) = .383, p < .000$ and a moderate uphill with Shaw $r(230) = .511, p < .000$, with the faultline computation using variables of gender and nationality. In Table 5, the AWS seem to even have a stronger relationship with the other computations, Thatcher $r(29) = .733, p < .000$, moderate relationship with Bezrukova $r(29) = .582, p < .001$ and Gibson $r(29) = .465, p = .011$, and strong relationship with LCCA $r(29) = .724, p < .000$, with the faultline computation using variables of gender and nationality and continuous variable of age. What is interesting to note is that LCCA significance increased with the amount of variables.

In Table 6, AWS proofed again to have outperformed all the other calculations, with having a strong relationship with Thatcher $r(29) = .733, p < .000$, and LCCA $r(29) = .722, p < .000$, and a moderate uphill relationship with Bezrukova $r(29) = .606, p < .000$. What was interesting to note is that the increase in variables, from surface to task related variables strengthen the relationship with Bezrukova model. What was also interesting to note as the variable increase the correlation become statistically non-significant between the models of Gibson, LCCA and Thatcher. Overall the researcher can confirm that even though certain models proofed to be more versatile they are significantly related to an extent or increase of variables. This could also be attributed to the team size and number of teams.

Table 4: Correlation, Faultline models, gender and nationality

		ASW	Gibson	LCCA	Shaw
AWS	Pearson Correlation	1			
	Sig. (2-tailed)				
Gibson	Pearson Correlation	.791**	1		
	Sig. (2-tailed)	.000			
LCCA	Pearson Correlation	.383**	.164*	1	
	Sig. (2-tailed)	.000	.024		
Shaw	Pearson Correlation	.511**	.534**	.283**	1
	Sig. (2-tailed)	.000	.000	.000	
**. Correlation is significant at the 0.01 level (2-tailed).					
*. Correlation is significant at the 0.05 level (2-tailed).					

Source: Author

Table 5: Correlations, Faultline models, Gender, nationality and age

		AWS (0.1,1,1)	Thatcher	Bezrukova	Gibson	LCCA
AWS(0.1,1,1)	Pearson Correlation	1				
	Sig. (2-tailed)					
Thatcher	Pearson Correlation	.773**	1			
	Sig. (2-tailed)	.000				
Bezrukova	Pearson Correlation	.582**	.671**	1		
	Sig. (2-tailed)	.001	.000			
Gibson	Pearson Correlation	.465*	.505**	.499**	1	
	Sig. (2-tailed)	.011	.005	.006		
LCCA	Pearson Correlation	.724**	.405*	.268	.336	1
	Sig. (2-tailed)	.000	.029	.160	.075	
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Source: Author

Table 6: Correlations, Gender, age, nationality, education discipline, education level, and functionality

		AWS	Thatcher	Bezrukova	LCCA	Gibson
AWS	Pearson Correlation	1				
	Sig. (2-tailed)					
Thatcher	Pearson Correlation	.773**	1			
	Sig. (2-tailed)	.000				
Bezrukova	Pearson Correlation	.606**	.684**	1		
	Sig. (2-tailed)	.000	.000			
LCCA	Pearson Correlation	.722**	.396*	.261	1	
	Sig. (2-tailed)	.000	.033	.172		
Gibson	Pearson Correlation	.460*	.276	.208	.130	1
	Sig. (2-tailed)	.016	.164	.298	.519	
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Source: Author

This study is a first to incorporate Namibian data and compare current variable against each other and compare several available faultline measures with the same data sets and systematically increasing the demographic variables to visualise the effect. The ASW, with the aim to overcome some of the other measures of Meyer and Glenz (2013) initial

comparison limitations and accepted the findings of the study that the ASW turned out to be the most versatile and accurate measure. Even though it may seem the researcher speaks in favour of the AWS future adoption as a faultline measure that is suitable for dealing with cases where multiple subgroups can at least be expected, yet the other faultline measure listed above should not be discourage in application and analysis can be made across informational and personality faultlines..

III. RECOMMENDATIONS

This data presented a complex picture of strong faultline; The suggestions are in there primary practical impact that one way to overcome strong faultlines is to create a superordinate team identity for Namibian teams or where this tendency surface (Van Knippenberg, Dawson, West, & Homan, 2011). An important advantage of a superordinate team identity may be that it facilitates knowledge transfer by reducing the negative view of outgroup members and by making in group members receptive to the information shared by others. The researcher recommend that team members could more likely to use their diverse resources when team members believed in the value of diversity. Consequently, the researchers suggest that managers need to explain the value of diversity, especially for more complex tasks, pointing out how task performance can benefit from it.

IV. CONCLUSION

All of these theoretical underpinnings of the effects of team faultlines may lead to the assumption that Namibia need to broaden the way research is conducted in diversity and need to incorporate more variables toward the broader construct of intersectionality alignment to some degree with the faultline construct (Meyer, Glenz, Antino, Rico, & González-Romá, 2014). Research on the faultline model helps us to understand why, how, and when team-member diversity will lead to positive or negative team outcomes. Drawing on the Namibian data presented we described a set of possible implications for managers who lead teams with membership diversity, beyond the visible spectrum. By describing these implications and categorizing and sequencing them in a logical way, the gap between research and practicing managers has been bridged, providing practical advice for managers whose teams have diverse compositions.

V. ETHICAL ISSUES

The purpose of the research paper was first explained to the participants and only after their consent did they partake in the study. The researcher strived for honesty, confidentiality and anonymity which included keeping the identity of respondents private.

ACKNOWLEDGEMENT

The author wants to acknowledge the contributions from Dr Marius F. Johannes and Dr Brian Lweendo who assisted to formulate this paper to this best of their abilities.

REFERENCES

- [1] Bezrukova, K., Jehn, K. A., Zanutto, E. L., & Thatcher, S. M. (2009). Do workgroup faultlines help or hurt? A moderated model of faultlines, team identification, and group performance. *Organization science*, 20, 35-50. doi:10.1287/orsc.1080.03.
- [2] Blau, P. M. (1977). A macrosociological theory of social structure. *The American journal of sociology*, 83, (1), 26-54.
- [3] Boerner, S., Linkohr, M., & Kiefer, S. (2011). Top management team diversity: Positive in the short run, but negative in the long run? *Team performance management: An international journal*, 17, 328 - 353. Retrieved from www.emeraldinsight.com/1352-7592.htm.
- [4] Carpenter. (2002). The implications of strategic and social context for the relationship between top management team heterogeneity and firm performance. *Strategic management journal*, 23, (3), 275-284.
- [5] Dawson, J. (2011). Measurement of work group diversity. (Unpublished doctoral dissertation), Aston University, Birmingham.
- [6] Gibson, C., & Vermeulen, F. (2003). A healthy divide: Subgroups as a stimulus for team learning behaviour. *Administrative science quarterly*, 48, 202-239. doi:10.2307/3556657.

- [7] Hambrick, D., & Mason, P. (1984). Upper echelons: The organisation as a reflection of its top managers. *The academy of management review*, 9, (2), 193-206.
- [8] Harrison, D., & Klein, K. (2007). What's the difference? Diversity constructs as separation, variety, or disparity in organizations. *Academy of management review*, 1-30.
- [9] Lau, D. C., & Murnighan, J. K. (1998). Demographic diversity and faultlines: The compositional dynamics of organizational groups. *Academy of management review*, 23, (2), 325-340.
- [10] Lau, D. C., & Murnighan, J. K. (2005). Interactions within groups and subgroups: The effects of demographic faultlines. *The academy of management journal*, 48, (4), 645-659.
- [11] Li, J., & Hambrick, D. (2005). Factional groups: A new vantage on demographic faultlines, conflict, and disintegration in work team. *Academy of management journal*, 48, (5), 794-813.
- [12] Meyer, B., & Glenz, A. (2013). Team faultline measures: A computational comparison and a new approach to multiple subgroups. *Organizational research methods*, doi:10.1177/1094428113484970 .
- [13] Meyer, B., Glenz, A., Antino, M., Rico, R., & González-Romá, V. (2014). Faultlines and subgroups: A meta-review and measurement guide. *Small group research*, 45, (6), 633-670. doi: 10.1177/1046496414552195.
- [14] Meyer, B., Shemla, M., Li, J., & Wegge, J. (2015). On the same side of the faultline :inclusion in the leader's subgroup and employee performance. *Journal of Management Studies*, 1-27. DOI:10.1111/joms.12118.
- [15] Nishii, L. H., & Goncalo, J. (2008). Demographic faultlines and creativity in diverse groups. *Center for advanced human resource studies*, 1-31.
- [16] Rico, R., Molleman, E., Sánchez-Manzanares, M., & Van der Vegt, G. (2007). The effects of diversity faultlines and team task autonomy on decision quality and social integration. *Journal of management*, 33, (1), 111-132. D oi:10.1177/0149206306295307.
- [17] Shaw, J. (2004). The development and analysis of a measure of group faultlines. *Organizational research methods*, 7, (1), 66-100.
- [18] Solanas, A., Selvam, R. M., Navarro, J., & Leiva, D. (2012). Some common indices of group diversity: Upper boundaries. *Proceedings of measuring behavior*, 28-31.
- [19] Thatcher, S., & Patel, P. (2011). Demographic faultlines: A meta-analysis of the literature. *Journal of applied psychology*, 96, (6), 1119-1139.
- [20] Thatcher, S., & Patel, P. (2012). Group faultlines: A review, integration, and guide to future research. *Journal of management*, 38, (4), 969-1009. doi: 10.1177/0149206311426187.
- [21] Thatcher, S., Jehn, K., & Zanutto, E. (2003). Cracks in diversity research: The effects of diversity faultlines on conflict and performance. *Group decision and negotiation*, 12, 217-241. doi:10.1023/A:102332540694 6.
- [22] Trezzini, B. (2008). Probing the group faultline concept: An evaluation of measures of patterned multi-dimensional group diversity. *Quality and quantity*, 42, 339-368. doi:10.1007/s11135-006-9049-z.
- [23] Van der Kamp, M., Tjemkes, B., & Jehn, K. (2011). Faultline activation and deactivation and their effect on conflict. Paper Presented at the 24rd annual international association of conflict management conference, (pp. 1-30). Istanbul, Turkey.
- [24] Van Knippenberg, D., Dawson, D., West, M., & Homan, A. (2011). Diversity faultlines, shared objectives, and top management team performance. *Human relations*, 64, doi:10.1177/0018726710378384.
- [25] Wax, A. (2013). Impact of social and informational faultlines on patterns of trust and coordination in teams. (Unpublished master's thesis). Georgia institute of technology, USA.
- [26] Wei, L., & Wu, L. (2013). What a diverse top management team means: Testing an integrated model. *Journal of management studies*, 50, (3), 389-412.
- [27] Williams, K., & O'Reilly, C. (1998). Demography and diversity in organisations: A review of 40 years of research. *Organizational behaviour*, 77-140.
- [28] Zanutto, E. L., Bezrukova, K., & Jehn, K. A. (2011). Revisiting faultline conceptualization: measuring faultline strength and distance. *Quality and quantity*, 1-15.