

# 团队人口统计特征多元化与绩效关系的元分析\*

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**摘要** Harrison 和 Klein (2007)将团队人口统计特征多元化划分为分离、多样和不平等三种类型。借鉴这一分类, 运用元分析的方法检验了不同类型的团队人口统计特征多元化对团队绩效的影响, 以解释以往多元化研究结论不一致的原因。基于中外 137 篇论文(345 个效应值, 79639 个团队)的元分析结果显示, 多样性多元化对团队绩效有正向影响, 而分离型多元化和不平等型多元化对团队绩效的主效应并不显著。调节效应检验显示, 团队人口统计特征多元化与不同类型绩效的关系存在显著差异, 且团队人口统计特征多元化与绩效的关系在不同国家地域和不同类型团队中也存在显著差异。研究结果有助于跨国企业和中国本土企业通过合理的多元化管理来提升团队和企业绩效。

**关键词** 团队多元化; 分离; 多样; 不平等; 绩效

**分类号** B849; C936

## 1 引言

中国自古以来就主张多元化人才策略, “一人计短, 两人计长”、“三个臭皮匠赛过诸葛亮”等广为流传的谚语均体现了多元化所带来的潜在好处。对于现代组织, 多元化人才配置策略也得到了企业管理者的高度重视, 企业往往通过选聘多学科和多职业背景人员来进行团队建设。在团队人员配置过程中, 团队成员人口统计特征(如学历和任期)多元化(diversity)是最直接、最容易操作的人员配置方式之一。这种配置方式之所以受到广大企业的欢迎, 一个重要的原因在于团队成员的人口统计特征可以被看作是他们认知框架的有效代理机制, 进而影响团队成员的行为及其交互结果(Hambrick, 2007)。

尽管近年来团队多元化得到了工业与组织心理学和管理学领域众多研究者的关注(van Dijk & van Engen, 2013; van Knippenberg & Schippers, 2007), 但其作用机理尚存在诸多不一致。一些研究者认为多元化是功能性的, 能够为团队带来更多新观点, 进而改善团队工作质量(Guillaume, Dawson,

Woods, Sacramento, & West, 2013; Williams & O'Reilly, 1998); 而另外一些研究者则认为多元化会带来刻板印象, 产生内群体和外群体, 造成凝聚力和满意度的下降, 并导致群体内冲突和离职概率的增加(Harrison & Klein, 2007)。

造成这些不一致的原因主要有两个: 一是团队多元化具有不同类型(Harrison & Klein, 2007); 二是研究情境存在很大差异, 需要将它们分离出来(Bell, Villado, Lukasik, Belau, & Briggs, 2011)。首先, 从团队多元化分类角度来看, 依据其分布特征可以分为分离型多元化、多样型多元化和不平等型多元化(Harrison & Klein, 2007)。这些分类有着不同的内涵、理论基础和操作化测量方式, 因而会拥有不同的结果, 但以往研究却把它们混为一谈, 这在中国多元化研究中尤为明显。其次, 从研究情境角度来看, 各个研究都有其特有的情境, 如不同研究可能采用不同类型的团队绩效作为结果变量, 也可能采用不同类型的团队作为研究样本。同时, 近年来, 东方国家研究者对团队多元化的关注与日俱增, 其中一些研究发现基于西方国家的多元化理论和实

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践可能并不适用于东方国家。这说明不同情境下的多元化对团队结果的影响可能会有所差异(Joshi & Roh, 2009), 因而需要将这些情境作为调节变量, 并检验他们对研究结果的影响。

为了弥补这些不足, 本研究对国内外团队多元化研究的现状进行了回顾, 并选取了中外相关的实证研究进行了元分析(meta-analysis), 检验不同类型多元化与团队绩效的关系, 以及其中潜在的调节变量。

## 2 理论基础与研究假设

### 2.1 团队多元化的界定与分类

团队多元化(team diversity)指的是团队成员在个体属性上的差异(Harrison & Klein, 2007; van Knippenberg & Schippers, 2007), 这些个体属性既可以是显性的人口统计特征, 也可以是隐性的心理特征。由于团队成员隐性心理特征很难有效测量, 因而研究者建议通过人口统计特征来近似代替这些不可见的心理特征(Hambrick, 2007)。在此基础上, 研究者对团队人口统计特征多元化展开了广泛研究, 但研究结论却存在诸多不一致。鉴于此, 研究者开始尝试对多元化进行分类, 并认为不同的多元化会对团队结果产生不同的影响。其中, 近年来较具影响力的分类是由 Harrison 和 Klein (2007)提出的。他们将团队多元化分为分离型多元化(diversity as separation)、多样型多元化(diversity as variety)

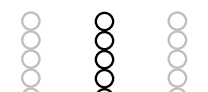
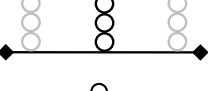
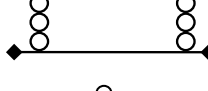
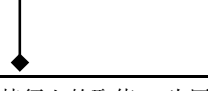
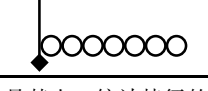
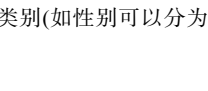
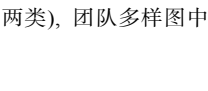
和不平等型多元化(diversity as disparity)。

分离型多元化指的是团队成员在立场和观点上的差异程度, 通常是信念、价值观或态度上的对立或者不一致(Harrison & Klein, 2007)。例如, 当团队内年轻成员支持改革方案, 而年长成员由于保守而反对改革时, 就会形成年龄分离型多元化。从表 1 可以看到, 当团队内所有成员拥有相同观点时, 分离型多元化程度最低; 而当团队内形成两个势均力敌的极端派系时, 分离型多元化程度最高(Solanas, Selvam, Navarro, & Leiva, 2012)。分离型多元化往往通过标准差(standard deviation, SD)或平均欧几里得距离(mean Euclidean distance, MED)进行衡量。

多样型多元化通常指的是与知识和经历相关的种类上的差异, 如专长、职能背景和行业经历方面的多元化(Harrison & Klein, 2007)。从表 1 可以看到, 当团队内所有成员处于同一分类时, 多样型多元化程度最低; 而当团队内所有成员所处的分类都不同的时候, 多样型多元化程度最高(Harrison & Sin, 2006; Solanas et al., 2012)。多样型多元化往往通过 Blau 系数或熵(Entropy)指数进行衡量。

不平等型多元化通常指的是团队成员在有价值的资源或社会资产方面的差异(Harrison & Klein, 2007; Magee & Galinsky, 2008)。例如, 任期较长的成员在占有组织各项资源上具有明显优势, 进而会形成团队任期不平等型多元化。从表 1 可以看到,

表 1 团队分离、多样和不平等的测量

| 多元化类型 | 测量指标     | 英文缩写    | 计算公式                                                             | 最小值                                                                                  | 最大值                                                                                   |
|-------|----------|---------|------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 团队分离  | 标准差      | SD      | $\sqrt{\frac{\sum_{i=1}^n (x_i - u)^2}{n}}$                      |  |  |
|       | 平均欧几里得距离 | MED     | $\frac{1}{n} \sum_{i=1}^n \sqrt{\sum_{j=1}^n (x_i - x_j)^2} / n$ |  |  |
| 团队多样  | Blau 系数  | Blau    | $\sum_{i=1}^k p_i^2$                                             |  |  |
|       | 熵指数      | Entropy | $-\sum_{i=1}^k [p_i \cdot \ln(p_i)]$                             |  |  |
| 团队不平等 | 变异系数     | CV      | $\frac{\sqrt{\frac{1}{n} \sum_{i=1}^n (x_i - u)^2}}{u}$          |  |  |
|       | 基尼系数     | Gini    | $\frac{\sum_{i=1}^n \sum_{j=1}^n  x_i - x_j }{2n^2 u}$           |  |  |

注:  $n$  为团队成员个数,  $x_i$  和  $x_j$  分别为第  $i$  个和第  $j$  个团队成员在某人口统计特征上的取值,  $u$  为团队成员某人口统计特征的均值,  $p_i$  为团队中某类人口统计特征的比例(如团队中男性占比),  $k$  为人口统计特征的类别(如性别可以分为男女两类), 团队多样图中不同的形状代表具有不同类别的个体(如不同的职能背景)

当团队内所有成员拥有相同资源时, 不平等型多元化程度最低; 当团队所有资源被一个人所占有, 而其他成员均处于最底层, 没有任何资源的时候, 不平等型多元化程度最高(Harrison & Sin, 2006)。不平等型多元化往往通过基尼系数(gini coefficient)或变异系数(coefficient of variation, CV)进行衡量。

## 2.2 团队多元化与团队绩效

分离型多元化的理论基础为相似性吸引理论和社会分类理论。相似性吸引理论认为团队成员的相似性能够降低分离型多元化, 此时所有成员的态度和观点较为类似, 有助于产生更高的合作水平、信任和社会整合程度(Guillaume et al., 2013; Williams & O'Reilly, 1998)。而根据社会分类理论, 较高的分离型多元化往往会诱发团队断层(faultlines), 并促进团队内部基于身份的子群体的产生(Carton & Cummings, 2012, 2013; Cooper, Patel, & Thatcher, 2014)。此时子群体成员往往会更关心子群体内部成员的利益, 而将子群体以外成员当做威胁, 这会降低子群体之间的合作意愿和凝聚力。在这种消极氛围的影响下, 分离型多元化可能会诱发更高的子群体间冲突(Carton & Cummings, 2013; Thatcher & Patel, 2011), 进而导致更差的任务绩效(de Wit, Greer, & Jehn, 2012; O'Neill, Allen, & Hastings, 2013)。因此提出如下假设:

假设 1a: 分离型多元化与团队绩效负相关。

多样型多元化的理论基础为信息加工理论和变异-选择-保留理论, 这些理论通常认为拥有不同人口统计特征的成员可能拥有不同的经验和看问题的方式, 会为团队带来不同的决策信息(Han, Han, & Brass, 2014), 能够拓展团队视野并促进团队知识的整合, 从而促进更高的团队创造性、更高的决策质量以及更高的团队灵活性(Guillaume et al., 2013; van Dijk & van Engen, 2013)。因此, 由于积极的信息加工过程, 多样型多元化能够改善团队和组织绩效(Qian, Cao, & Takeuchi, 2013)。基于此, 提出如下假设:

假设 1b: 多样型多元化与团队绩效正相关。

不平等型多元化的理论基础为公平理论和社会等级理论, 这些理论通常认为不平等能够增加团队成员之间的竞争, 降低成员之间的沟通意愿, 并提升成员的不公平感(Connelly, Tihanyi, Crook, & Gangloff, 2014)。团队成员的人口统计特征往往会与团队内有价值的资源发生关联(Harrison & Klein, 2007; van Dijk & van Engen, 2013)。因此, 当人口统

计特征不平等程度较高的时候, 与这种人口统计特征发生关联的团队资源的不平等程度也较高(Harrison & Klein, 2007)。这可能会诱发某些团队成员的不满, 降低团队成员的投入、工作积极性和合作水平, 进而降低团队的绩效水平(Trevor, Reilly, & Gerhart, 2012)。基于此, 提出如下假设:

假设 1c: 不平等型多元化与团队绩效负相关。

## 2.3 绩效类型的调节作用

团队多元化与绩效的关系可能会随着绩效类型的不同而不同。常见的团队绩效可以分为创新绩效(即创新过程的效率和产出)和一般任务绩效(即一般任务过程的效率和产出)两类(Bell et al., 2011; Joshi & Roh, 2009)。从不同类型的多元化来看, 多样型多元化能够整合团队成员不同的信息来源, 有利于提升团队创新绩效(van Knippenberg & Schippers, 2007)。然而, 在创新过程中, 多样型多元化往往会引发消极的团队冲突(Qian et al., 2013), 进而降低团队任务绩效(de Wit et al., 2012)。因此, 多样型多元化与创新绩效的正向关系可能会强于其与一般任务绩效的关系。从分离型多元化和不平等型多元化来看, 分离和不平等会降低团队成员的合作意愿, 这种不合作既不利于团队创新, 也会进一步影响团队任务绩效表现。此外, 分离和不平等会产生消极的交互过程, 如较低的凝聚力(Thatcher & Patel, 2011)和较高的不公平感(Halevy, Chou, & Galinsky, 2011), 更加不利于任务绩效的提升。因此, 与创新绩效相比, 分离型多元化和不平等型多元化与一般任务绩效的负面关系更强。故提出如下假设:

假设 2: 绩效类型会调节团队多元化与团队绩效的关系, 即多样型多元化与创新绩效的正相关程度高于一般任务绩效, 而分离型多元化、不平等型多元化与团队一般任务绩效的负相关程度高于创新绩效。

## 2.4 国家地域的调节作用

一些研究者指出团队多元化的作用机理可能会随着国家和地域的不同而不同(Johnson, Schnatterly, & Hill, 2013)。借鉴先前组织管理领域的元分析, 本研究将国家地域分为东方国家和西方国家两类(Anderson et al., 2010), 处于同一地域的国家往往拥有相似的价值观和文化(Gupta, Hanges, & Dorfman, 2002)。西方研究者多认为分离型多元化会造成团队冲突, 进而导致团队绩效的下降(Carton & Cummings, 2012)。然而, 对于集体主义思想占主流的东方国家而言, 人们更加倾向于维持

和谐的氛围, 尽力回避潜在的竞争和冲突行为(Qian et al., 2013), 这也意味着分离型多元化在东方国家中的负面作用会被削弱。对于多样型多元化而言, 同西方国家相比, 诸如中国、日本、韩国等东方国家的员工更加倾向于相互合作(Kim, Wang, Kondo, & Kim, 2007; Wang, Jing, & Klossek, 2007), 因而更可能从成员多样中获益, 并产生更高的团队绩效。对于不平等型多元化而言, 由于东方集体主义国家的任务依赖程度更高, 增加了团队对等级和不平等的需求, 能够更好的发挥等级和不平等的排序和激励作用(Halevy et al., 2011), 从而改善团队绩效。基于此, 提出如下假设:

假设 3: 国家地域会调节团队多元化与团队绩效之间的关系, 即与西方国家相比, 东方国家中的多样型多元化与团队绩效的正面关系会更强; 而与东方国家相比, 西方国家中的分离型多元化和不平等型多元化与团队绩效的负面关系会更强。

## 2.5 团队类型的调节作用

团队类型也可能会调节多元化与绩效之间的关系(Joshi & Roh, 2009)。常见的团队类型包括高管团队、研发团队和一般工作团队等(Bell et al., 2011; de Wit et al., 2012)。从团队的工作内容来看, 高管团队通常面临大量复杂的决策任务, 研发团队通常需要创造和开发新的产品与服务, 而一般工作团队则以常规任务为主(Bell et al., 2011)。

从分离型多元化角度来看, 分离往往形成团队断层和子群体, 并诱发子群体间冲突(Thatcher & Patel, 2011, 2012), 而团队冲突领域的研究者则发现团队冲突的负面作用在高管团队以外的团队类型中表现的更为明显(de Wit et al., 2012)。因此, 本研究预期高管团队的分离型多元化与团队绩效的负相关程度低于研发团队和一般工作团队。

从多样型多元化角度来看, 高管团队和研发团队面临的任务具有一定的非常规性和不确定性, 经常需要一些独到的观点和新颖的方案, 因而更加需要团队成员多样的观点来弥补单个高管决策的不足(de Wit et al., 2012; 任兵, 魏立群, 周思贤, 2011)。而对于一般工作团队而言, 由于其所面临的任務相对较为常规, 解决起来相对比较容易, 因而对团队多样的需求较低(Horwitz & Horwitz, 2007)。这说明与一般工作团队相比, 高管团队和研发团队更能从团队多样中获益。

从不平等型多元化角度来看, 不平等可能会在权力更高的团队(如高管团队)中发挥更大的负面作

用。研究表明, 当团队成员的权力都很低时(如研发团队和一般工作团队), 团队不平等有助于解决冲突, 促进团队和谐; 而当团队成员的权力都很高时(如高管团队), 团队成员更倾向于权力争斗, 此时的不平等不利于团队冲突的解决, 进而引发低绩效(Greer & van Kleef, 2010)。这说明团队不平等对于高管团队更加有害。基于此, 提出如下假设:

假设 4: 团队类型会调节团队多元化与团队绩效的关系, 即与其他类型团队相比, 高管团队中的分离型多元化与绩效的负向关系更低, 一般工作团队中的多样型多元化与绩效的正相关程度更低, 高管团队中的不平等型多元化与绩效的负向关系更强。

本研究的概念模型如图 1 所示。

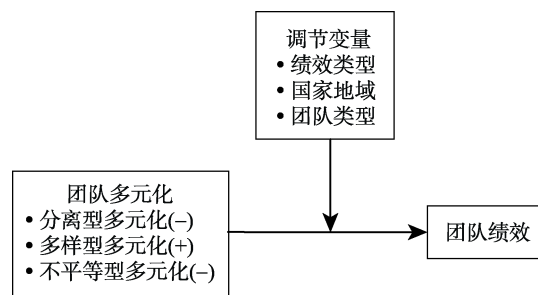


图 1 研究模型

注: 图中“-”表示负相关, “+”表示正相关

## 3 研究方法

### 3.1 文献查找

文献查找的时间范围限定于 1984~2014 年间公开发表的学术论文。中文文献为发表在心理学 CSSCI 期刊(如心理学报、心理科学)以及国家自然科学基金委认定的 30 种管理科学重要期刊上(如管理世界、南开管理评论)的论文, 通过在中国知网(CNKI)搜索主题包含“团队”或“群体”, 并且包含“异质性”、“多元化”、“多样性”、“性别”、“年龄”、“任期”、“教育背景”、“学历”、“职能背景”或“人口统计”等关键词, 并结合检索到文章的参考文献进行查漏补充, 初步筛选出 254 篇文献。随后本研究按照如下标准对文献进行二次筛选: (1)实证研究; (2)采用 SD、MED、Blau、Entropy、CV 或 gini 来衡量团队人口统计特征多元化; (3)文章涉及绩效变量; (4)文章中明确报告了相关的效应值(effect size); (5)样本与其他研究没有重复。根据这五个标准, 最终得到 33 篇中文文献。英文文献在 Web of Knowledge 中检索公开发表的 SSCI 期刊(如 Academy of Management Journal、Strategic Management Journal),

搜索主题包含“team”或“group”，并且包含“heterogeneity”、“diversity”、“dispersion”、“gender/sex”、“age”、“tenure”、“education”、“function background”或“demography”等关键词。为了减少发表偏差(publication bias)，本研究也通过参考以往元分析的文献部分进行查漏补缺，初步筛选出 663 篇文献。根据前面五条文献筛选标准，最终得到 104 篇相关英文文献。这 137 篇中英文文献共涉及 49 个期刊(期刊目录详见附录)，包含 345 个效应值，79639 个团队，所涉及个体超过 537071 人。其中，西方国家研究论文 86 篇，东方国家研究论文 51 篇(中国 44 篇，东西方国家地域区分详见下文)。

### 3.2 变量编码

本研究遵循 Harrison 和 Klein (2007)的界定及其操作化测量方式，将通过 SD 或者 MED 来衡量多元化的变量编码为分离型多元化；将通过 Blau 或者 Entropy 指数来衡量多元化的变量编码为多样型多元化；将通过 CV 或 gini 来衡量多元化的变量编码为不平等型多元化。本研究中的团队绩效是指常规任务过程和创新过程中的效率和产出(Joshi & Roh, 2009)。除了收集各类多元化与绩效的效应值之外，还收集了通过量表测量的团队主观绩效的内部一致性信度系数，以用于后续元分析的测量误差修正。对于某些未报告信度的主观绩效变量，通过元分析样本中的信度平均值替代。对于团队多元化和客观绩效变量，由于都是客观数据，因而假定其不存在测量误差(Hulsheger, Anderson, & Salgado, 2009)。

绩效类型、国家地域和团队类型依据各论文研究方法部分的样本描述进行识别。绩效类型主要包含一般任务绩效和创新绩效。其中，一般任务绩效主要是指一般任务过程的效率和产出(Joshi & Roh, 2009)，而创新绩效主要是指创新过程的效率和产出(Bell et al., 2011)。国家地域类型主要包括西方国家和东方国家。本研究通过对 Hofstede (1984)研究中所报告的 50 个国家的文化数据进行聚类分析，将样本中的美国、荷兰、德国、以色列、瑞典、西班牙、爱尔兰、英国、加拿大、澳大利亚和意大利归类为西方国家，将中国内地、中国台湾、中国香港、新加坡、韩国和日本归为东方国家和地区。这一结果与 Gupta 等(2002)基于 61 个国家的文化聚类分析结果类似。本研究借鉴 Bell 等(2011)关于团队的分类，将团队类型划分为高管团队、研发团队和其他团队(即混合工作团队)。

为了保证多元化类型、效应值数据以及各情境调节变量编码的准确性，由两名博士生对所有实证研究进行独立编码，随后进行比对。各变量的评定者间信度介于 0.83 到 1.00 之间，均值为 0.92，说明变量编码存在较高的一致性。对于有差异的数据，两名博士生再次检查核对论文中的原始数据，对于仍存在差异的数据在讨论后达成一致。

### 3.3 元分析过程

元分析软件采用 Comprehensive Meta Analysis 2.0，首先使用 Hunter 和 Schmidt (2004)的元分析程序估计未修正的基于样本加权的平均相关系数  $r$ ，其次估计根据测量误差(信度)修正后的总体相关系数  $\rho$ ，并基于此计算修正后的总体相关系数的 95% 置信区间。本研究遵循 Borenstein, Hedges, Higgins 和 Rothstein (2011)的建议，在元分析过程中全部采用随机效应模型。在进行各组变量关系的元分析之前，首先采用漏斗图法、Egger 检验法以及 Begg 和 Mazumdar 检验法来检验各组变量关系效应值的发表偏差问题(Borenstein et al., 2011)。整体而言，各组变量关系效应值的漏斗图显示效应值多呈对称分布，且集中在平均值附近；Egger 检验以及 Begg 和 Mazumdar 检验结果均未达到统计上的显著性水平，说明本研究所包含样本的发表偏差效应并不明显。元分析过程中调节变量的显著性通过统计量  $Q_B$  进行衡量，如果该统计量显著，则表明效应值在不同类别间存在显著差异。 $Q_W$  是进行组内异质性检验的统计量，如果显著则表明组内仍存在未被识别的调节变量。

## 4 结果

从表 2 可以看到，分离型多元化与绩效弱负相关，但未达到显著水平；多样型多元化与绩效显著正相关( $\rho = 0.07, p < 0.001$ )；不平等型多元化与绩效的关系不显著。因而，假设 1b 得到支持，假设 1a 和 1c 没有得到验证。从表 2 的异质性检验可以看到，所有效应值的  $Q_W$  统计量均达到显著水平，说明在不同类型多元化与团队绩效的关系链中存在一些潜在的情境调节变量。

由于本研究的团队绩效既包含一般任务绩效，也包含创新绩效(Bell et al., 2011; Joshi & Roh, 2009)，因此我们也比较了团队多元化与不同类型绩效之间关系的差异，即绩效类型的潜在调节作用(见表 3)。可以看到，多样型多元化与创新绩效( $\rho = 0.12, p < 0.001$ )和任务绩效( $\rho = 0.05, p < 0.01$ )的正

相关程度存在显著差异( $Q_B = 6.43, p < 0.001$ ), 而不平等型多元化与创新绩效( $\rho = 0.05, p < 0.05$ )和任务绩效( $\rho = -0.02, p = 0.18$ )的关系也存在显著差异( $Q_B = 5.87, p < 0.05$ ), 说明绩效类型能够显著调节多元化与绩效之间的关系。因此, 假设 2 得到部分验证。

表 4 列出了地域作为潜在调节变量的分析结果。可以看到, 地域对多样型多元化与绩效的调节作用显著( $Q_B = 7.63, p < 0.01$ )。在东方国家中, 多样型多元化与绩效强相关( $\rho = 0.10, p < 0.001$ ); 而在西方国家中, 多样型多元化与绩效边际正相关( $\rho = 0.03, p < 0.10$ )。地域对不平等型多元化与绩效的调节作用也是显著的( $Q_B = 4.62, p < 0.05$ )。在东方国家中, 尽管不平等型多元化与绩效的关系不显著, 但表现出了一定正相关的趋势; 而在西方国家中, 不平等型多元化与绩效边际负相关( $\rho = -0.02, p < 0.10$ )。然而, 地域对分离型多元化与绩效关系的调节作用不显著。因而, 假设 3 得到了部分验证。

表 5 列出了团队类型作为潜在调节变量的分析

结果。可以看到, 团队类型对多样型多元化与绩效关系的调节作用显著( $Q_B = 24.34, p < 0.001$ ), 多样型多元化与研发团队绩效( $\rho = 0.23, p < 0.001$ )和高管团队绩效( $\rho = 0.07, p < 0.001$ )显著正相关, 但多样型多元化与混合工作团队绩效关系并不显著。团队类型对其他类型多元化与绩效关系的调节作用不显著, 因此假设 4 得到部分验证。

为了更进一步理解团队和地域的调节作用, 我们对团队类型和地域进行了交叉, 以比较特定团队类型中地域的调节作用, 结果如表 6 所示。可以看到, 东、西方国家研发团队的多样型多元化与绩效关系存在显著差异( $Q_B = 4.98, p < 0.05$ ), 与西方国家研发团队相比( $\rho = 0.06, p = 0.52$ ), 东方国家研发团队多样型多元化与绩效的正相关程度更强( $\rho = 0.31, p < 0.001$ )。此外, 与东方国家高管团队相比, 西方高管团队的不平等型多元化表现出显著的负面作用( $\rho = -0.03, p < 0.05$ ), 说明地域对于高管团队中的不平等型多元化与绩效关系的调节作用显著( $Q_B = 5.93, p < 0.05$ )。

表 2 团队分离、多样与不平等对团队绩效的影响

| 变量      | $k$ | $N$    | $r$   | $\rho$  | 95%置信区间       | $Q_W$      |
|---------|-----|--------|-------|---------|---------------|------------|
| 分离型多元化  | 33  | 2619   | -0.04 | -0.04   | [-0.11, 0.04] | 99.18***   |
| 多样型多元化  | 190 | 48268  | 0.06  | 0.07*** | [0.04, 0.09]  | 1087.05*** |
| 不平等型多元化 | 122 | 113113 | 0.00  | 0.00    | [-0.02, 0.02] | 592.67***  |

注: \*\*\* $p < 0.001$ ;  $k$  表示效应值个数;  $N$  表示团队个数;  $r$  表示未修正的平均相关系数;  $\rho$  表示修正的总体相关系数; 置信区间为基于修正的总体相关系数的 95%置信区间;  $Q_W$  为组内异质性检验统计量

表 3 绩效类型对团队多元化与团队绩效关系的调节作用

| 变量      | 绩效类型 | $k$ | $N$   | $r$   | $\rho$  | 95%置信区间       | $Q_W$     | $Q_B$   |
|---------|------|-----|-------|-------|---------|---------------|-----------|---------|
| 分离型多元化  | 创新绩效 | 9   | 595   | -0.06 | -0.06   | [-0.21, 0.08] | 11.16     | 0.17    |
|         | 任务绩效 | 24  | 2024  | -0.03 | -0.03   | [-0.11, 0.06] | 87.13***  |         |
| 多样型多元化  | 创新绩效 | 50  | 14834 | 0.11  | 0.12*** | [0.07, 0.16]  | 483.55*** | 6.43*** |
|         | 任务绩效 | 140 | 33434 | 0.04  | 0.05**  | [0.02, 0.07]  | 567.97*** |         |
| 不平等型多元化 | 创新绩效 | 20  | 32011 | 0.04  | 0.05*   | [0.00, 0.09]  | 93.48***  | 5.87*   |
|         | 任务绩效 | 102 | 81102 | -0.02 | -0.02   | [-0.04, 0.01] | 498.62*** |         |

注:  $^{\dagger}p < 0.100$ ; \* $p < 0.050$ ; \*\* $p < 0.010$ ; \*\*\* $p < 0.001$ ;  $k$  表示效应值个数;  $N$  表示团队个数;  $r$  表示未修正的平均相关系数;  $\rho$  表示修正的总体相关系数; 置信区间为基于修正的总体相关系数的 95%置信区间;  $Q_W$  为组内异质性检验统计量;  $Q_B$  为组间异质性检验统计量

表 4 地域对团队多元化与团队绩效关系的调节作用

| 变量      | 地域 | $k$ | $N$   | $r$   | $\rho$             | 95%置信区间       | $Q_W$     | $Q_B$  |
|---------|----|-----|-------|-------|--------------------|---------------|-----------|--------|
| 分离型多元化  | 西方 | 28  | 2295  | -0.05 | -0.05              | [-0.13, 0.03] | 95.53***  | 0.45   |
|         | 东方 | 5   | 324   | 0.02  | 0.02               | [-0.16, 0.21] | 1.82      |        |
| 多样型多元化  | 西方 | 104 | 29279 | 0.03  | 0.03 $^{\dagger}$  | [-0.00, 0.07] | 407.20*** | 7.63** |
|         | 东方 | 86  | 18989 | 0.09  | 0.10***            | [0.07, 0.13]  | 653.25*** |        |
| 不平等型多元化 | 西方 | 63  | 72472 | -0.02 | -0.02 $^{\dagger}$ | [-0.05, 0.00] | 301.91*** | 4.62*  |
|         | 东方 | 59  | 40641 | 0.01  | 0.02               | [-0.01, 0.04] | 274.62*** |        |

注: 表中符号含义见表 3 注释

表 5 团队类型对团队多元化与团队绩效关系的调节作用

| 变量      | 团队类型   | <i>k</i> | <i>N</i> | <i>r</i> | $\rho$  | 95%置信区间       | $Q_W$     | $Q_B$    |
|---------|--------|----------|----------|----------|---------|---------------|-----------|----------|
| 分离型多元化  | 研发团队   | 3        | 366      | 0.04     | 0.04    | [-0.18, 0.27] | 2.07      | 0.53     |
|         | 高管团队   | 2        | 179      | -0.05    | -0.06   | [-0.34, 0.24] | 0.08      |          |
|         | 混合工作团队 | 28       | 2074     | -0.05    | -0.05   | [-0.13, 0.04] | 92.28***  |          |
| 多样型多元化  | 研发团队   | 17       | 9723     | 0.21     | 0.23*** | [0.15, 0.30]  | 260.28*** | 24.34*** |
|         | 高管团队   | 102      | 29304    | 0.06     | 0.07*** | [0.04, 0.10]  | 591.22*** |          |
|         | 混合工作团队 | 71       | 9241     | 0.01     | 0.01    | [-0.04, 0.05] | 164.20*** |          |
| 不平等型多元化 | 研发团队   | 2        | 143      | 0.06     | 0.07    | [-0.13, 0.26] | 0.00      | 1.03     |
|         | 高管团队   | 86       | 102133   | -0.01    | -0.01   | [-0.03, 0.01] | 305.54*** |          |
|         | 混合工作团队 | 34       | 10837    | 0.01     | 0.01    | [-0.03, 0.05] | 282.28*** |          |

注：表中符号含义见表 3 注释

表 6 不同团队类型中地域的调节作用

| 变量      | 团队类型   | 地域 | <i>k</i> | <i>N</i> | <i>r</i> | $\rho$  | 95%置信区间        | $Q_W$     | $Q_B$ |
|---------|--------|----|----------|----------|----------|---------|----------------|-----------|-------|
| 分离型多元化  | 研发团队   | 西方 | 1        | 224      | 0.07     | 0.08    | [-0.17, 0.31]  | 0.00      | 0.11  |
|         |        | 东方 | 2        | 142      | 0.02     | 0.02    | [-0.20, 0.24]  | 1.76      |       |
|         | 高管团队   | 西方 | 2        | 179      | -0.06    | -0.07   | [-0.21, 0.08]  | 0.08      | -     |
|         |        | 东方 | -        | -        | -        | -       | -              | -         |       |
|         | 混合工作团队 | 西方 | 25       | 1892     | -0.05    | -0.05   | [-0.15, 0.04]  | 90.63***  | 0.28  |
|         |        | 东方 | 3        | 182      | 0.02     | 0.02    | [-0.24, 0.28]  | 0.05      |       |
| 多样型多元化  | 研发团队   | 西方 | 7        | 5065     | 0.06     | 0.06    | [-0.12, 0.24]  | 9.95      | 4.98* |
|         |        | 东方 | 10       | 4658     | 0.29     | 0.31*** | [0.18, 0.43]   | 201.92*** |       |
|         | 高管团队   | 西方 | 39       | 16725    | 0.06     | 0.06*   | [0.01, 0.11]   | 224.44*** | 0.25  |
|         |        | 东方 | 63       | 12579    | 0.07     | 0.08*** | [0.04, 0.11]   | 366.70*** |       |
|         | 混合工作团队 | 西方 | 58       | 7489     | 0.00     | 0.00    | [-0.04, 0.04]  | 154.66*** | 0.08  |
|         |        | 东方 | 13       | 1752     | 0.02     | 0.02    | [-0.07, 0.10]  | 9.49      |       |
| 不平等型多元化 | 研发团队   | 西方 | 2        | 143      | 0.06     | 0.07    | [-0.10, 0.23]  | 0.00      | -     |
|         |        | 东方 | -        | -        | -        | -       | -              | -         |       |
|         | 高管团队   | 西方 | 39       | 64202    | -0.03    | -0.03*  | [-0.06, -0.00] | 114.98*** | 5.93* |
|         |        | 东方 | 47       | 37931    | 0.01     | 0.02    | [-0.01, 0.04]  | 185.35*** |       |
|         | 混合工作团队 | 西方 | 22       | 8127     | 0.02     | 0.03    | [-0.05, 0.11]  | 169.38*** | 0.21  |
|         |        | 东方 | 12       | 2710     | 0.00     | 0.00    | [-0.11, 0.10]  | 79.49***  |       |

注：表中符号含义见表 3 注释

5 讨论

5.1 不同类型多元化与团队绩效

从元分析的主效应来看，多样型多元化与团队绩效正相关，这与信息加工理论的基本假设相一致。然而，分离型多元化和不平等型多元化与团队绩效的主效应并不显著。这些结果说明对团队多元化进行合理分类是非常必要的，并不是所有的团队人口统计特征多元化都会对团队结果产生显著影响。通过对以往国内文献的回顾，我们发现国内研究很少明确区分这些维度，并采用与之匹配的理论

和操作化测量方式。相反，国内研究多是通过 CV 衡量连续型人口统计特征多元化，通过 Blau 或 Entropy 指数衡量离散型人口统计特征多元化。我们的研究表明这种研究取向是不可取的。从理论角度而言，不同的测量对应于不同的多元化类型（见表 1），而不同类型的多元化又具有不同的理论含义及影响机理。研究者必须根据理论基础来选择相对应的操作化方式。如果研究者将团队多元化界定为多样型多元化，本应通过 Blau 或 Entropy 指数进行操作化，但在实际操作过程中却采用 CV 或 SD 的测量方式，就可能会导致错误的结果。此外，从



元分析中所涉及的中文实证研究来看,中国学者对分离型多元化的关注度较低,限制了对该类型多元化在中国文化背景下作用机制的理解,这也有待今后研究者进行拓展。

### 5.2 绩效类型对多元化-绩效关系的调节作用

调节效应检验结果显示,团队多元化与不同类型绩效的关系存在显著差异。多样型多元化与创新绩效的相关性高于与一般任务绩效的相关性,这说明多样型多元化有利于促进新想法的产生,但在转化为最终团队输出的时候,其效力有所下降。令我们感到意外的是,不平等型多元化能够显著提升团队创新绩效,但与任务绩效关系并不显著。这可能得益于社会等级带来的沟通效率的提升(Magee & Galinsky, 2008),进而改善团队创新绩效水平,但与此同时,不平等可能对团队成员态度造成消极影响(Harrison & Klein, 2007),进而削弱了创新向任务结果的转化。因此,我们建议研究者在进行团队多元化的相关研究时,需要明确区分团队结果变量类型以及多元化类型,提升研究结论的针对性和可靠性。

### 5.3 国家地域对多元化-绩效关系的调节作用

先前的研究很少比较不同国家团队多元化研究结果的差异。我们的研究结果证实了国家地域的调节作用,这说明在不同国家地域中,企业应当采取不同的多元化管理策略。尽管多样型多元化对于东西方国家都具有积极作用,但是在受儒家思想影响较大的东方国家中,多样型多元化与绩效的相关性明显高于西方国家。这可能得益于东方国家的集体主义取向,在团队协作方面较西方团队更胜一筹(Wang et al., 2007),因而东方国家的团队更能够发挥多样型多元化的优点。此外,与社会等级理论的核心观点相一致,元分析结果表明西方国家不平等型多元化的负面作用更强。这是因为西方国家以高个体主义和低权力距离价值观为主,彼此之间的相互依赖程度较低,且更加注重组织和团队公平,因而团队资源的不平等配置往往会带来消极的结果(Halevy et al., 2011)。同时,儒家思想所倡导的关系取向使东方人更加注重内部和谐(Chen, Chen, & Huang, 2013),这也使得东方国家不平等型多元化的负面作用较西方国家明显下降。

### 5.4 团队类型对多元化-绩效关系的调节作用

元分析结果验证了团队类型对多元化和绩效关系的调节作用。对于决策型的高管团队和智力型的研发团队而言,由于成员彼此之间的相互依赖程度较高,多样型多元化能够较好地促进知识和经历

的整合,因而其积极作用更大;而对于一般的工作团队而言,由于工作任务的相互依赖程度较低,多样型多元化并不能发挥信息整合的优势。

同时,通过进一步的元分析,我们发现研发团队、高管团队的多元化与绩效的关系也存在地域差异。在东方国家中,研发团队的多样型多元化表现出了更强的正面作用,我们认为这主要是得益于东方国家人们在研发任务中展示出较高的合作水平(Kim et al., 2007);而在西方国家中,研发团队的多样型多元化与绩效的关系并不显著,其可能的原因在于西方个体主义国家的人们在研发任务中更加倾向于说服其他人,展示出较多的竞争行为(O'Neill et al., 2013),进而削弱了研发团队的绩效。此外,在西方国家中,高管团队不平等型多元化表现出了较强的负面作用,这与西方的高管团队等级研究结果较为一致;而在东方国家中,高管团队不平等型多元化与绩效的关系并不显著,可能的原因在于中国是高权力距离社会,对于不平等的接纳程度更高(Hofstede, 1984),从而在一定程度上削弱了团队不平等的消极作用。

### 5.5 研究启示和局限

从企业实践的角度来讲,本文的研究结果有助于跨国企业和中国本土企业通过合理的多元化管理来提升团队和企业绩效。企业应当意识到多样型多元化所带来的好处,尤其是在东方国家以及研发和高管团队中所发挥的重要作用。同时,企业也应当意识到团队所处情境的重要性,必须根据自身特点制定适合自己的人才多元化管理策略。东方国家团队管理者更应该重视多样型多元化配置策略,发挥集体的作用;而西方国家团队管理者除了发挥团队多样的潜在好处之外,还要避免团队成员特征的不平等配置。

本研究也不可避免的存在一些缺陷。首先,部分元分析的效应值数量偏少,可能会限制其有效性。其次,本文所关注的调节变量是远远不够的,元分析结果中很多组内效应异质性检验的  $Q_H$  统计量也是显著的,表明仍有很多情境变量尚未考虑进来,也需要今后研究进一步探索。本研究也试图对行业等情境变量进行编码,但是国内外研究对行业的界定非常不同,行业交叉现象非常严重,且很多研究没有报告行业类型,最终不得不放弃对行业调节作用的检验。本研究建议今后的研究在样本描述上更加规范,为后续的元分析提供良好的数据参考。

需要指出的是,本研究主要关注的是团队人口



统计多元化与绩效之间的关系,并没有关注深层多元化对绩效的影响,如团队能力多元化、人格多元化(Barrick, Stewart, Neubert, & Mount, 1998)、情感多元化(Barsade & Gibson, 2012)与团队绩效的关系。当前国内深层次多元化与团队绩效关系的研究尚不多见,也值得研究者进行进一步的探索。此外,团队多元化不仅仅局限于个体成员之间的差异,也可以表现为团队断层和团队子群体之间的差异(Carton & Cummings, 2012)。例如,分离型多元化会形成基于分离的断层,进而产生基于身份的子群体;多样型多元化会形成基于多样的断层,进而产生基于知识的子群体;不平等型多元化会形成基于不平等的断层,进而产生基于资源的子群体(Carton & Cummings, 2012)。因而,未来研究者也可以关注团队断层、团队子群体多元化对团队交互过程和结果的影响。

## 6 结论

团队人口统计特征多元化问题越来越受到理论界和实践界的关注,但其研究结论存在诸多不一致。鉴于此,研究者开始尝试对多元化进行分类,以期解释产生这些相矛盾结论的原因。本研究在借鉴 Harrison 和 Klein (2007)分类方法的基础上,运用元分析的方法检验了团队分离型多元化、多样型多元化与不平等型多元化对团队绩效的影响。结果显示不同类型的团队多元化与绩效关系存在较大差异,且这些关系会受到绩效类型、国家地域和团队类型的调节。具体表现为如下四个方面:(1)从主效应来看,团队多样型多元化对绩效有正向影响,而分离型多元化和不平等型多元化与绩效的关系并不显著;(2)从绩效类型来看,多样型多元化、不平等型多元化与创新绩效的相关性显著高于其与一般任务绩效的相关性;(3)从国家地域角度来看,东方国家的多样型多元化表现出了更强的正面作用,而西方国家的不平等型多元化表现出了更强的负面作用;(4)从团队类型角度来看,多样型多元化在研发团队和高管团队中的正面作用更强。

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附录 元分析中所涉及的期刊及其论文数

| 期刊名                                                | 论文数 | 期刊名                                                  | 论文数 |
|----------------------------------------------------|-----|------------------------------------------------------|-----|
| Academy of Management Journal                      | 16  | 管理科学                                                 | 2   |
| Group & Organization Management                    | 9   | 科学学研究                                                | 2   |
| Journal of Organizational Behavior                 | 8   | 中国软科学                                                | 2   |
| Administrative Science Quarterly                   | 6   | 心理学报                                                 | 1   |
| Strategic Management Journal                       | 6   | Academy of Management Learning & Education           | 1   |
| Journal of Management                              | 5   | Applied Psychology                                   | 1   |
| 管理评论                                               | 5   | Canadian Journal of Administrative Sciences          | 1   |
| International Journal of Human Resource Management | 4   | Corporate Governance: An International Review        | 1   |
| Organization Science                               | 4   | European Management Journal                          | 1   |
| Small Group Research                               | 4   | Human Relations                                      | 1   |
| 管理世界                                               | 4   | Intercultural Education                              | 1   |
| 管理学报                                               | 4   | International Journal of Conflict Management         | 1   |
| 科学学与科学技术管理                                         | 4   | Innovation: Management, Policy & Practice            | 1   |
| 南开管理评论                                             | 4   | Information Systems Research                         | 1   |
| Creativity and Innovation Management               | 3   | Journal of Applied Social Psychology                 | 1   |
| Journal of Applied Psychology                      | 3   | Journal of Business & Management                     | 1   |
| Journal of Business Ethics                         | 3   | Journal of Educational Administration                | 1   |
| Journal of Management Studies                      | 3   | Journal of Personnel Psychology                      | 1   |
| 科研管理                                               | 3   | Organizational Behavior and Human Decision Processes | 1   |
| British Journal of Management                      | 2   | Research Policy                                      | 1   |
| Group Dynamics: Theory, Research, and Practice     | 2   | Systems Research and Behavioral Science              | 1   |
| Journal of Business Research                       | 2   | The Leadership Quarterly                             | 1   |
| Journal of Business Venturing                      | 2   | 研究与发展管理                                              | 1   |
| Journal of Managerial Psychology                   | 2   | 预测                                                   | 1   |
| Management Science                                 | 2   | 合计                                                   | 137 |

## A Meta-Analysis of the Relationship between Team Demographic Diversity and Team Performance

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### Abstract

Over the past decades, team demographic diversity has become a topic of considerable interest to industrial and organizational psychology scholars and organizational managers. However, there is little consistent evidence regarding the relations between team demographic diversity and team performance. There are at least two potential reasons to explain these inconsistencies. First, there are different forms of team demographic diversity and the specific type of diversity should have different effects on team performance. For example, team demographic diversity can be categorized as separation, variety and disparity based on the statistical distribution of team members' characteristics. Second, past researchers suggest considering contextual issues in team demographic diversity research. Rather than test the direct relationship between team demographic diversity and team performance, they have pointed out that contextual factors (e.g., cultural context) should play an important moderating role in the relationship between team demographic diversity and team performance.

In order to explain the inconsistencies in past research examining the link between team demographic diversity and team performance, we conducted a meta-analysis to examine the effects of different types of team



demographic diversity on team performance. Our meta-analysis was based on 345 effect sizes from 137 Eastern and Western empirical studies with 79,639 teams. Each author independently coded the data and resolved discrepancies through discussion. In our coding system, we coded diversity as separation, variety, or disparity based on the measures of diversity used in each empirical paper. Further, we collected contextual data to examine the potential moderating effects of contextual factors, such as performance types, cultural context and team types.

Results of main effects showed that team demographic variety had significantly positive effects on team performance, whereas team demographic separation and disparity were unrelated to team performance. Further, moderation analyses showed that the relations between team separation, variety, disparity and team performance were moderated by performance types, cultural context and team types. Specifically, considering performance type as a moderator, variety and disparity were more positively correlated with innovation performance compared to general task performance. With respect to cultural context, team demographic variety in eastern countries was more positively correlated with team performance compared to variety in western countries, whereas team demographic disparity in western countries was more negatively correlated with team performance compared to disparity in eastern countries. Regarding team types, team demographic variety was more positively correlated with performance in top management teams (TMTs) and research and development (R&D) teams compared to general work teams.

Our results showed that different demographic diversity had distinct effects on team performance, depending on the specific diversity type and context (e.g., performance types, culture and team types). However, many researchers rarely distinguish between different types of demographic diversity. Thus, we suggest that future studies should pay more attention on this issue by specifying the demographic diversity types. Further, teams in Eastern countries should increase diversity as variety to improve their performance, whereas teams in Western countries should not only pay attention to team demographic variety, but also need to decrease team demographic disparity to avoid its negative effects on team performance. Overall, our findings have specific implications for companies to improve their performance through team demographic diversity management.

**Key words** team diversity; separation; variety; disparity; performance